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ABSTRACT

This document presents an annotated list of video tapes available from the Video Tape Project of Carleton College. The tapes were produced for use by teacher educators. Many of the tapes involve new content and methodology. They feature unrehearsed classroom activity, not model teacher performance, and are not complemented with commentaries. The tape descriptions are presented under the categories of English, Modern Foreign Language, Science and Mathematics (with subcategories of elementary, junior high school, and senior high school), Social Studies (with the same subcategories as above), Foundations of Education, and General Methods. Two additional sections include equipment used in producing the tapes and information for ordering tapes. Each subject matter area category has two sections: an overview of all the tapes available and descriptions of individual tapes. (JG)

ED 059904

A CATALOG ----- VIDEO TAPES FOR TEACHER EDUCATION

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VIDEO TAPE PROJECT
CARLETON COLLEGE
NORTHFIELD, MINNESOTA 55057

FALL 1971

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A CATALOG OF VIDEO TAPES FOR TEACHER EDUCATION

"The Classroom As It Is"

The Video Tape Project
Carleton College
Northfield, Minnesota 55057

Helen D. Berwald
Project Director

Fall, 1971

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ERRATA

Please change entries to read as underlined

Page 25	(opposite ML 001)	Mrs. Sandra Commers
Page 67	(line 5)	content of Volumes M 200, 501-502, etc.
Page 69	(first description)	VOLUME M 203 (59 minutes)
Page 71	(end of description of M 504)	insert "$\underline{\underline{\Sigma}}$" between quotation marks
Page 83	(opposite SS 012-014)	Mrs. Sheila Arenson
Page 182	(line 5 of "Part III")	color-coded building pieces

and under "Volumes Used"

Page 173	opposite	SS 801	delete	and 209
	"	SS 807	"	603
	"	SS 810	"	and 025
Page 174	opposite	SS 812	add	623
	"	SS 813	"	619
	"	SS 814	"	638

ACKNOWLEDGEMENTS

The Video Tape Project has had many contributors without whose help, advice and cooperation, it could not have produced this library of video tapes.

Its initiation was made possible by a grant from the Charles F. Kettering Foundation in 1964; it received additional support from this source in 1966. In 1968 and again in 1970 it received financial support, and invaluable advisory assistance, for continued taping and editing activities from the National Science Foundation.

The contributions made by cooperating schools, teachers, pupils and parents cannot be overestimated. Requests for permission to make tapes were rarely refused; in only a few instances was the right to prohibit the distribution of taped material exercised. The public school districts in which tapes were made are: Chicago, Downers Grove and Niles Township (of Skokie), Illinois, Grand Rapids, Michigan; Albert Lea, Anoka, Bloomington, Edina, Golden Valley, Hutchinson, Minneapolis, Minnetonka, Mounds View, Northfield, Richfield, Robbinsdale, Roseville, St. Louis Park, St. Paul, Wayzata and West St. Paul, Minnesota; and Appleton, Wisconsin. Private schools involved in the Project are: the Edina Montessori School, Inc., Edina, Minnesota, Regina High School in Minneapolis and the University of Minnesota High School, which until a few years ago served as the University of Minnesota Laboratory School. In addition, two summer institutes were taped at the University of Illinois. The specific schools and school districts, in which the tapes were made, are identified on the tapes, excepting in those cases in which the school has preferred to remain anonymous.

Fifteen nationally recognized curriculum study projects have cooperated with the Project during the past few years in a variety of ways. Some have given advice but not become actively involved; others have been involved to the point of assisting in the selection of classes to be taped; some have worked very closely with the Project and have assumed responsibility for the editing of tapes related to their projects. Further information relating to content editors is given in the overview for each section.

Appreciation is also extended to the following persons, not associated with any of the cooperating curriculum study projects, who have served as special consultants:

Fred Blaisdell, Minneapolis Public Schools, Minneapolis, Minnesota
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In addition to acknowledging the invaluable services of the numerous persons who worked in the Northfield Project Headquarters during the past eight years, it is important to note the significant contributions made by members of the staff of the Associated Colleges of the Midwest, under whose auspices the Project was conducted until 1970: Dr. Blair Stewart (President of the Associated Colleges of the Midwest during the early years of the Project), Mrs. Martha Hodapp, Mrs. Pat Wishart, and Mrs. Ida Wallace.

Helen D. Berwald
Project Director
October, 1971

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INTRODUCTION

The tapes described in this document have been produced for those teacher educators who are seeking open ended audio-visual materials related to teaching-learning processes which they can adapt to their own course or program objectives. They are for those who would like to practice in teacher education what they urge teachers to do: to use inquiry techniques, to lend concreteness to discussions of educational processes through case study materials; to stress thoughtful problem solving rather than rote learning or routine modeling; to recognize that the concept of individual differences applies to teachers as well as to the pupils they teach; and that discussion, rather than exposition, should be the dominant teaching-learning activity in programs for teachers, whether pre-service or in-service.

A second major purpose for producing the tapes is to increase the effectiveness with which new curricular materials are being used in the classroom. Many of them involve content and methodology which is new to experienced and prospective teachers alike--new to experienced teachers in that they have not taught these kinds of materials, new to prospective teachers because they have not experienced such programs as students. For many teachers, their effective use requires that they make dramatic changes in their teaching approaches, philosophically and methodologically.

With these objectives in mind, the tapes produced by the Video Tape Project have been designed to provide content for analysis and discussion; they do not depict model teaching performances nor do they pretend to offer "right" answers. Rather, they feature unrehearsed classroom activity which has been recorded by remote control, without additional lighting, so as to interfere with normal classroom activity as little as possible. Although teacher behavior is recorded on the tapes, the belief that the responses of students are the crucial elements in examining teaching-learning processes has led to an emphasis on student behavior. The material offered for distribution has been selected from hundreds of hours of taped activity as that most likely to produce productive discussions.

The tapes do not include commentaries by experts. They show the action of the classroom as it happened, with some explanatory remarks when necessary. Suggestions as to questions which might be discussed or how each tape might be used are provided through supplementary, written materials. This procedure assures an instructor's independence in that he can use the suggestions provided, or, through using the video tape guide which indicates when certain events occur in the tape, he can sort out those parts of the tape which achieve his own purposes.

Sequences tend to be long rather than the short segments originally intended,because it was felt that the latter would curtail the freedom of the user. He would be forced to adopt the purpose established by the editor as a basis for selecting content. On the other hand, the longer sequences can be adapted to the purpose of the viewer. They can be used for interaction analyses or other kinds of research; they can be used in graduate courses in supervision, to mention only a few possibilities other than those specifically anticipated in the suggestions for use. Users whose purposes require only a part of the content provided on a tape are encouraged to take what they want and leave the rest. The relatively low cost of the video tape content should help to reduce the economic implications of unused material. These users are also urged to consider the possibility of ordering topical tapes which do feature shorter sequences.

Experimentation related to the use of the tapes has shown that they are least effective if used to provide a passive situation for the viewer, ie., if a tape is viewed in its entirety and then discussed in a general way at the end. Through what might be called "teach-along" techniques, the viewer can be given a very active role in the classroom proceedings shown on the tape. The tape can be interrupted at any point to ask how viewers would proceed if they were the teacher, or what response they would anticipate as a result of a given action. It can also be interrupted to discuss an event which has just occurred, and if any question arises as to what actually happened, the sequence can be replayed before moving on. Try-outs of tapes in the classroom strongly suggest that these video tapes are most effective when they are interrupted for immediate, concrete discussion of particular events, when viewers are required to be prepared to respond at any moment (as teachers must be); also, that materials projected simultaneously with an overhead projector as a kind of guide can increase the single-viewing usefulness of a tape.

The preceding statements should not be construed as implying that these tapes can be used only in a class setting. The supplementary materials prepared for each tape assume either class or individual use, but urge a kind of continuous involvement in both cases. An individual viewing the tapes alone should use the written materials which otherwise might be kept by the instructor. The reasons for processing the tapes in this way is two-fold. One, viewing tapes is time-consuming and relatively few can be used during regular class or workshop time. If a viewing station can be provided, an instructor may well wish to ask a group to view several tapes as an out-of-class assignment. Second, it is hoped that these tapes will contribute to the greater utilization of individualized instruction in teacher education. For example, at the preservice level a student teacher who is having difficulty with a particular aspect of his teaching might simply be referred to a tape which, together with the information contained in the supplementary materials, may help him at least identify if not analyze his problem. An experienced teacher, rather than join a general teachers' workshop conducted by a school district, might benefit from individually watching tapes pertaining to a new curriculum he is intending to introduce in his classes.

It would be a great injustice to teachers appearing in the tapes, the writers of the curriculum materials, and the cooperating schools if viewers made qualitative judgments about their work as a result of viewing these tapes. Because the editors believe that much can be learned by observing, analyzing and discussing "problems," they have often deliberately selected segments which are not representative. There are no poor teachers represented in the tapes; there are teachers who are having difficulties, perhaps because they are dealing with unfamiliar and/or untested materials, perhaps they have an especially challenging class, or perhaps they are just having one of those days which every experienced teacher knows only too well. In some instances teachers are attempting to use approaches unfamiliar to them and about which they themselves have serious misgivings. The fact that the content taped often represents the first trial of previously untested, unrevised materials produced by curriculum projects would make it grossly unfair to judge their materials on the basis of these tapes alone.

No words of gratitude or admiration can adequately express the high regard the Project Staff hold for the teachers who were sufficiently secure, courageous, and professionally interested to release even those viedo tapes which do not do justice to their usual teaching skill. The attitude expressed by most was that if their difficulties could help somebody else avoid the same pitfalls, it would be worth it to them. This respect and high regard extends to the staffs of the curriculum study projects as well. They, too, have been most generous in sharing early miscues, and have dared to let themselves be represented by unrehearsed classroom activity as opposed to carefully controlled demonstration lessons focusing on the virtues of their materials. These teachers and curriculum writers stand as bold adventurers in a world in which the practice has been to accentuate minor successes and hide major problems, thus prohibiting the kind of frontal attack which could lead to real improvements in teaching.

In summary, the purpose of the tapes is to contribute to the improvement of classroom teaching generally, and to the more effective utilization of new curricular materials, by encouraging teachers to think and to talk. To think about the implications of what is going on in a classroom; to think about educational theory, not in the abstract, but as something related to the realities of a classroom; to think about educational goals and the extent to which certain materials and methods promote or inhibit their achievement; to observe and recognize the significance of "incidental" learning; to think about what is happening to students as a result of the experiences planned for them. And then to talk, to discuss with each other their observations, analyses and conclusions, thereby enriching their own insights and understandings of educational processes, and ultimately, improving on their own teaching performances.

ENGLISH

OVERVIEW

Eight tapes which relate to the teaching of English are available:

Volume(s)	Subject	Grade	Teacher
E 410	Poetry (excerpts from a 5-day discussion of Dylan Thomas's "Especially When the October Wind")	9	Miss Marcia Blixt
E 610-611	Short Story (one day of small group discussion and one day of full class discussion of Katherine Mansfield's "The Fly")	Senior High	Mr. John Mossberg
E 701	Writing - Sentence & Paragraph (Group A Teacher-Student conferences)	10	Mrs. Lucy Steiner
E 702	Writing - Sentence & Paragraph (excerpts from a 3-day lesson on paragraphs of description with Group B)	10	Mrs. Lucy Steiner
E 705-707	Writing - Sentence & Paragraph (3 consecutive class periods spent on paragraphs of description with Group A)	10	Mrs. Lucy Steiner

The writing tapes show the same tenth-grade class which is working in a required writing course, "Sentence and Paragraph." The teacher has divided her nineteen students into Group A and Group B. She meets each group for three consecutive days while the rest are free to work elsewhere in the school. Each three-day lesson is scheduled as follows: first day--paragraphs assigned and written in class; second day--paragraphs read and discussed; third day--teacher-student conferences on paragraphs.

The editor considers the relatively unedited tapes, E 705-707, to be basic to the series because they present detailed information regarding the teacher's work with Group A in developing paragraphs of description.

Volume E 701 features individualized instruction through teacher-student conferences on paragraphs of exposition or argumentation, the assignment which preceded the one shown in E 705-707. Two of the conferences shown in E 701 were actually conducted during a subsequent class period; thus they appear twice (a duplication of about eighteen minutes) on E 701 and on E 705 which shows a complete lesson.

Volume E 702 contains excerpts from the teacher's three-day lesson with Group B. If used after the basic series, her work with this group can be contrasted and compared with that of Group A.

Some of the tapes are also recommended for teaching general methods. Volume E 410 centers on discussion as a class activity; E 610 and 611 show a class engaged in small group discussions; and E 701 provides material for a discussion of individualized instruction via teacher-student conferences.

All of the tapes in this category were made in cooperation with the Golden Valley Public Schools, District #275, Golden Valley, Minnesota, a suburb of Minneapolis. The material was recorded during the spring of 1971. Classes shown are heterogeneous in composition although the general level of the school population is above the national average.

Unless otherwise indicated, the following supplementary materials are provided with each tape:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

The tapes were planned and edited by Mrs. Andrea Iseminger, former English teacher and currently a member of the Project staff.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUME E 410 (57 minutes)

Ninth grade students are seen in the 7th week of a required 9-week course, "Poetry I." A five-day discussion of Dylan Thomas's poem, "Especially When the October Wind," is condensed into the one tape.

After an introduction to the poem, students divide into small groups to answer questions about the poem. The teacher assists small groups during part of two days. On the 3rd day the class meets as a whole to report their ideas. During the large group discussion on the 3rd and 4th days, the teacher permits the discussion to go as the students direct. During this time four interpretations of the poem emerge, each with its supporters, and the class as a whole is unable to reach consensus. By the fifth day the class seems to have reached an impasse with some students becoming disinterested or hostile. The teacher offers to present a possible interpretation of the poem for their consideration, but students disagree on accepting this offer; they discuss the teacher's role and the effect of her ideas on the class. From this students move to a general discussion of their work on the poem and their ideas on the course. They question the teacher on the purpose of the course, offer suggestions for revision, and evaluate their progress.

This tape can be used to discuss:

- *a) student work in small group and large group discussions;*
- *b) classroom discussion in which the teacher provides only a small amount of direction;*
- *c) the amount of time necessary for a student group to reach consensus;*
- *d) the effect on the group when consensus seems impossible, ie., hostility, indifference, concern with trifles;*
- *e) questions of classroom control; and*
- *f) the effect of a very difficult assignment on a class and, specifically, to consider the appropriateness of this poem for this class.*

It is suggested that this tape be used in comparison with Volumes E 610 and E 611, to illustrate contrasting ideas in several of the areas mentioned in the previous paragraph. The suggestions for use, included in the supplementary materials, are for use of this tape alone or in comparison with E 610 and E 611.

VOLUMES E 610 - E 611

These tapes show a senior high English class--sophomores, juniors and seniors--in a second level course in short story. In the first course and in the first four weeks of this course, the students have worked on short story plot, characterization, and theme. The term "structure" was introduced the day before this taping. During these two days the teacher works with structure and theme together in study of Katherine Mansfield's short story, "The Fly."

E 610 (50 minutes): This tape, unedited, shows small group discussions. In the first quarter of the tape the teacher prepares the class for work in small groups. Together the teacher and class work out a rough outline of the story's structure and plot. The teacher draws the general idea of the theme from this outline and asks each group to make a specific statement of theme. In the remainder of the tape the students discuss the story in small groups within the classroom. The teacher goes around the room to help each group.

When one group of students arrive at an understanding of the theme before the other groups have made much progress, the teacher confers with the successful group and assigns each of the members to assist another group. Discussion groups continue with their new member to the end of the hour.

E 611 (49 minutes): This tape, unedited, shows the entire discussion which follows the small group work on "The Fly." In the second day of discussion, the teacher reviews the work of yesterday's small groups and draws the entire class into clarification of the theme of the story, relating it to structure and plot.

The teacher and class discuss characterization of "the boss," questioning whether a change in character has taken place during the story and how this affects the ending. When this is concluded, a student who claims he does not understand presses for further explanation from the class. Students clarify their ideas in the process of explanation.

The following additional supplementary materials are provided with each tape:

1. Teacher's comments: a 6-page transcription of discussion with the teacher made at the conclusion of taping. The teacher's comments apply generally to his course, Short Story II, and specifically to the two tapes in this series.
2. Teacher's comments on the work which preceded the hours on tape.
3. Suggestions for comparison with E 410.

E 610 and E 611, used in combination, illustrate one teacher's handling of a short story discussion with advanced students. The elements of structure and theme are particularly stressed. The tapes show both small group and large group discussion and provoke questions about the use and effectiveness of both. These tapes are also recommended for use in general discussion of evaluating and testing, student involvement, reinforcement, and classroom control.

Recommended for contrast with E 610 and E 611 is Volume E 410, a poetry discussion with small and large groups, in which the teacher provides only a small amount of direction.

VOLUME E 701 (55 minutes)

On this tape the teacher confers with each student in Group A on his paragraph of exposition or argumentation. Two of the students present initial hostility which the teacher tries to overcome. In individual conferences with students, the following points are among those discussed: incomplete sentences, sentence breaks, emphasis, audience, reading and listening, use of examples, connotation, pronoun referent, word choice, topic sentence. Each student has an opportunity to respond to the comments made by the class yesterday when his paragraph was read anonymously. The last two conferences included were actually held during the following class period; thus, they are repeated on E 705.

This tape is recommended for: (1) those interested generally in individualized instruction and (2) those interested specifically in the teaching of English. Those in the latter group should first view series E 705-707 in order to place this tape within the teacher's pattern of three-day writing lessons. Volume E 701 may be used to discuss:

a) individualized instruction--its importance;
b) individualized instruction--its use in the normal classroom situation;

c) *methods of encouraging student writing;*
d) *methods of making corrections;*
e) *techniques for handling hostility;*
f) *techniques for establishing rapport;*
g) *a teacher's role in student conferences;*
h) *a writer's audience; and*
i) *effect of grading or lack of it on teacher-student conferences.*

VOLUME E 702 (57 minutes)

This tape summarizes a three-day lesson on paragraphs of description with Group B. The teacher introduces techniques of description and assigns a paragraph to be written in class. Six of the paragraphs are read anonymously the next day and discussed by the students. The class is divided into teams to play a game designed to develop the use of specific details in description. A second paragraph of description is assigned. The following day paragraphs are read aloud for students to guess the subject of description. The class creates a setting to be used for a third paragraph of description. While students write, the teacher returns papers and confers with student writers.

Volume E 702 is recommended for use after series E 705-707. That series, unedited, presents the teacher's work on paragraphs of description with Group A. Volume E 702, used as contrast, shows the teacher's response to Group B and the changes made in her lesson because of the differences in students and because of the first group's reactions to her assignments.

All those areas listed in the catalog for series E 705-707 are appropriate for this tape, though work is seen in less detail here. In addition, this tape may be used:

a) *to compare the effect of different groups of students on the teacher and the effect of the teacher on different groups;*
b) *to discuss the effectiveness of several writing assignments with little attention paid to them, vs. fewer assignments and more attention; and*
c) *to discuss the merits of arriving at the terms of an assignment by class discussion.*

VOLUMES E 705 - E 707

These three tapes show one three-day lesson in which students begin to work on paragraphs of description; they are considered basic to the writing tapes.

E 705 (51 minutes): This tape shows introduction and assignment of the first paragraph of description. The teacher introduces techniques of description and makes her assignment. She clarifies the assignment in response to student questions. While students write, the teacher confers with two boys with whom she did not have conferences on last week's assignment. Both boys present some hostility to the teacher which she tries to overcome. She helps some students with their writing on today's assignment. (The belated conferences with the two boys are also shown in E 701).

E 706 (49 minutes): This tape shows seven student paragraphs being read and discussed. Reading of paragraphs is delayed while the teacher addresses two students who have not done the assignment. Paragraphs are read anonymously by the teacher; the class discussion of the paragraphs includes the following subjects: whether emphasis on unusual features describes or distorts, effect of "swear words," effect of "very," use of similes in description, role of physical and personal traits in description, the lack of specific detail. The teacher concludes the hour with suggestions on how to move from general to specific.

E 707 (51 minutes): This tape shows the reading and discussion of paragraphs of description, the presentation of the next assignment, and teacher-student conferences on the paragraphs.

The teacher reads the three remaining papers written for this assignment. Class discussion brings up the effect of "very," reactions to irony, the use of specific details. The teacher presents her case against the use of "very" and "really" and gives an assignment on the use of specific details. One paragraph for last week's assignment is read and discussed. Students work on assignment while the teacher returns the paragraphs of description and confers with student writers about their reactions to class criticism.

In addition to the regular supplementary materials, copies of the student papers read and discussed are provided.

These tapes can be used to discuss:

a) *one teacher's answer to the problem of providing individualized instruction within the normal classroom situation;*
b) *the nature of writing assignments, and how they might be made;*
c) *the use of a peer group audience as critics of student writing;*

d) the relative importance in writing of one's own taste, of the student audience reaction, and of the teacher's opinion;
e) how much should be corrected in student writing;
f) methods and criteria for evaluating writing;
g) the importance of individualized instruction in writing;
h) techniques of teaching in one-to-one situations; and
i) methods for using writing errors as a means to writing instruction.

Two other tapes are recommended for comparison:

E 701--One hour of teacher-student conferences with these same students on paragraphs of argumentation.
E 702--Condensed into one hour, the three days in which this teacher presents paragraphs of description to the other half of this class.

FRENCH I

OVERVIEW

Believing that progression is an important aspect of teaching a language, the Project staff made the decision to select a single beginning French class for taping during a six-week period rather than tape a number of classes and teachers for shorter periods of time. Of the tapes recorded, those selected for distribution are offered in two different formats to enable the user to choose that which best serves the goals and organization of his program.

The following seven tapes show consecutive, unedited lessons covering the introduction and development of A-LM Dialog 2:

Volume(s)	Subject
ML 500	Includes introduction to A-LM Dialog 2.
ML 501-505	Includes 2nd through 6th day of work with A-LM Dialog 2.
ML 506	Regular class period (no work with Dialog or in language laboratory).

These tapes, along with ML 802 which deals with oral testing related to Dialog 2, are recommended for persons wishing to consider progression in learning skills within the context of a complete lesson. Because they are unedited, they have the added advantage of providing a basis for discussing general topics such as teacher image, classroom atmosphere, and lesson planning. It is largely for the latter purpose that ML 506 has been included in that it shows the organization of a language lesson in which neither a dialog nor the language laboratory is utilized.

Recognizing that some users prefer tapes which lend themselves to a more concentrated attack upon specific teaching processes, the same series of tapes have been used to prepare the following eight topical tapes:

Volume	Subject
ML 800	2nd and 3rd day of work with A-LM Dialog 2 (duplicates segments of ML 501 and 502).
ML 801	4th - 6th day of work with A-LM Dialog 2 (duplicates segments of ML 503-505).
ML 802	Oral testing following work on A-LM Dialog 2 (relatively unedited).
ML 803	Evaluating student work.
ML 804	Reading and writing skills.
ML 805	Use of drills in a beginning language class.
ML 806	Teaching grammar.
ML 807	Motivational techniques.

Those persons choosing the topical approach are urged to begin with ML 500 to introduce the class and the teacher, thus providing a context for the topical sequences. There is some repetition of content in the complete-lesson series and the topical group; however, it is believed to be negligible with the exception of ML 800 and ML 801 which parallel the dialog component in ML 501-505.

These tapes were recorded during the months of September and October of 1967 in cooperation with School District #273, Edina Public Schools, Edina, Minnesota. The school uses a modified audio-lingual approach to the teaching of elementary language skills. The class is composed primarily of high school sophomores with some juniors and seniors; it is ungrouped but students would generally be considered above average. The teacher is Mrs. Katie Schmidt. The school serves an upper socio-economic level community which is a suburb of Minneapolis.

Mrs. Helen Jorstad, language teacher working in the Northfield Public Schools, served as a special consultant in the selection and editing of the tapes.

Each tape is accompanied by the following supplementary materials:

1. Guide for locating important events on the tape.
2. Background information which gives a curricular and course context for the tape.
3. Suggestions pertaining to the use of the tape, including illustrative discussion questions.
4. Copies of the dialogs used as reproduced from French, Level One prepared by the Staff of the Modern Language Materials Development Center. Harcourt, Brace & World, Inc., 1963 (first edition).

In addition to using the text referred to, the class will work with materials from G. Mauger, Cours de Langue et de Civilisation Françaises I, Librairie Hachette, Paris, 1953.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUME ML 500 (55 minutes)

This volume is considered to be basic to Volumes ML 501-505 and/or ML 800 and 801 in the French I category. This is the first tape of a series featuring beginning French students. The class is conducted primarily in French. Taping was begun during the seventh class meeting of the school year; students have no books and have not yet seen the written language.

The class begins with warm-up activities focusing on important items contained in A-LM Dialog 1 which they have just concluded. The teacher also conducts review drills on months of the year and days of the week. After the warm-up activities, the teacher introduces A-LM Dialog 2, A la Bibliothèque. After the class has learned the first three lines, the teacher moves to an introduction of the indefinite article which she does by asking students to recognize and repeat the names of objects which require either "un" or "une" before the noun. Students repeat different sounds as modeled by the teacher, but they do not inquire about the difference, so no explanation is given by the teacher at this point. From this activity, the class moves to a review of the alphabet through repetition, singing and spelling of names. The lesson concludes with a review of the three lines of the Dialog presented earlier, both as modeled by the teacher and by a prepared audio tape. Teacher reactions to the lesson are included at the end of the tape.

ML 500 can be used to discuss:

- *a) how beginning language courses can be conducted primarily in the language being learned;*
- *b) the pacing of warm-up activities;*
- *c) techniques used to associate meanings with French phrases and sentences;*
- *d) one approach to the introduction of a dialog;*

e) drill techniques involved in teaching a dialog, especially one which contains relatively long and complex sentences;
f) the use of a pattern drill to introduce new grammatical concepts; and
g) the overall form and objectives of a somewhat representative A-LM language lesson.

Inasmuch as ML 500 shows the entire class period, unedited, it can be used for a number of general teaching-learning analyses as well.

VOLUMES ML 501 - ML 505

These tapes show complete lessons for the second through the sixth day of work with A-LM Dialog 2. It is recommended that they be used in conjunction with ML 500 (the first day of work including the introduction of A-LM Dialog 2) and ML 802 (the seventh consecutive session showing the oral testing which followed work on Dialog 2). Teacher's comments about the class session are included at the end of Volumes ML 501-504.

ML 501 (58 minutes): This tape begins with warm-up activities including drills with the date, numbers and the alphabet. These are followed by a review of the first three lines of A-LM Dialog 2 and learning of three new lines. The teacher then conducts a drill involving the use of subject nouns followed by continuation of work on indefinite articles and gender and an explanation of "un" and "une." Toward the end of the class period the students play a game of "Voilà."

ML 502 (57 minutes): Warm-up activities include a review of previously learned as well as new materials. A review of the first six lines of A-LM Dialog 2 is followed by learning the next four lines. The students resume work with the indefinite articles and gender and are introduced to weather expressions. They then return to work on Dialog 2, practicing with a tape recorder.

ML 503 (39 minutes): Warm-up activities and a review of weather expressions precede the review of the first ten lines of A-LM Dialog 2 and the learning of the last two lines. A short drill follows on indefinite articles and use of the negative.

ML 504 (38 minutes): Warm-up activities involve a review of numbers, indefinite articles and the negative. The class reviews weather expressions learned earlier and adds new material. They again practice A-LM Dialog 2, this time in its entirety.

ML 505 (55 minutes): Further work is done on A-LM Dialog 2 in preparation for the oral test tomorrow (contained in ML 802). There is a review of weather expressions, indefinite articles, gender, the negative, subject pronouns and numbers. The class is then exposed to verb conjugation before returning to dialog practice with a partner.

The primary use of the series is that of analyzing the progression of a class in the development of various skills, in illustrating how activities are blended into a complete lesson, and of providing a concrete situation for practice in developing lesson plans and behavioral objectives. The tapes also can be used to identify techniques used by the teacher in order to help students sustain their interest in the lesson as well as to observe high school student reactions to a game situation. Inasmuch as each tape shows an entire class period, they can be used for a number of general teaching-learning analyses as well.

VOLUME ML 506 (56 minutes)

This volume is illustrative of a beginning language lesson which is conducted without the use of a dialog or language laboratory. The students have just recently been introduced to written French.

The lesson includes: (a) warm-up activities; (b) a drill centering on telling time which involves the use of words taught previously in a dialog and which introduces students to the French twenty-four hour system; (c) a drill involving indefinite articles and gender; (d) practice of the "oi" sound as isolated from words with which the class is familiar; and (e) a drill contrasting the regular "o" sound and the nasal "õ."

In addition to using the tape to analyze the various segments of the lesson, it can also be helpful in:

a) *considering the pattern of activities included in the lesson;*
b) *discussing factors which determine the sequence of activities included in a full class period;*
c) *analyzing student interest and motivation during an extended period of time; and*
d) *examining techniques used by the teacher to sustain student interest.*

VOLUMES ML 800 - ML 801

These topical tapes are recommended for use in conjunction with ML 500 and ML 802. ML 500 contains the introduction of Dialog 2 and the teaching of the first three lines. Volumes ML 800 and 801 show those parts of the next five days of class devoted to further work on the Dialog; activities with the Dialog have been extracted from Volumes ML 501-505. The oral testing of A-LM Dialog 2 is contained in ML 802. The students are beginning French students who have not yet seen the written language.

ML 800 (45 minutes): The second and third days of work with A-LM Dialog 2 include a review of the first three lines and learning three new, followed by a review of the first six lines and learning the next four.

ML 801 (38 minutes): The fourth, fifth and sixth days of work with A-LM Dialog 2 show the class reviewing the first ten lines and learning the last two and then practicing the entire Dialog in preparation for an oral test. The teacher comments on the class sessions.

The tapes can be used to discuss:

- *a) progression in the development of a dialog;*
- *b) a variety of procedures employed in presenting and practicing a dialog;*
- *c) the objectives of dialog teaching;*
- *d) ways of reinforcing classroom learning, in the classroom itself or in the language laboratory;*
- *e) practice in developing a teaching plan in advance of viewing a lesson, and comparing it with that prepared by the teacher;*
- *f) ways in which plans may need to be modified in the light of actual classroom progress shown by students;*
- *g) ways of evaluating oral performance of a dialog; and*
- *h) one's reactions to a lesson with those expressed by the teacher.*

VOLUME ML 802 (53 minutes)

This tape serves as the final volume for both the ML 500-505 series and the ML 500, 800-801 series. It also can be used singly as an illustration of one approach to evaluating oral performance on a dialog. It shows the oral testing relating to A-LM Dialog 2 on which students have been working for the past six days.

Students are asked to present the dialog in pairs aloud in front of the class. After each presentation, the students go to the teacher's desk in the rear of the room to hear her comments on their pronunciation and to receive their grade. An interview with the teacher follows the class session.

ML 802 can be used to discuss:

- *a) progression in the development of a dialog;*
- *b) various ways in which oral performance can be evaluated;*
- *c) ways of translating evaluative information into constructive comments to be made to students, and to compare these with those made by the teacher; and*
- *d) student responses to a particular type of testing situation.*

If viewers are asked to evaluate the performance of each pair before the teacher's comments are shown, it can also be very useful in gaining experience in this area and in testing one's own evaluations against those of the teacher.

VOLUME ML 803 (33 minutes)

This volume deals with the evaluation of student achievement. The students shown are working with A-LM Dialog 4 and have just been introduced to written French.

The tape includes sequences showing: (a) an explanation of punctuation followed by an exercise; (b) students receiving information relating to the procedure for their first dictée; (c) the dictée itself, given the following day; (d) an example of a translation test procedure where the teacher recites in French and students write in English; (e) a discussion of make-up work policies; and (f) the teacher discusses with the interviewer the make-up work policies of the school, a cheating incident and her approach to grading.

ML 803 can be used to discuss:

a) ways of giving and scoring a dictée;
b) procedures employed in giving a translation test and problems involved in scoring it;
c) problems related to make-up work and the extent of the teacher's responsibility in getting students to complete it;
d) what precautions, if any, the teacher should take to inhibit cheating, why students cheat, and what the teacher should do once it has occurred; and
e) one approach to grading in a beginning language class and the weights which might be assigned to various skills.

VOLUME ML 804 (56 minutes)

This tape focuses on the teaching of reading and writing skills. It includes sequences taken from six different class periods to show the progression from rote learning of the alphabet to drills of sounds isolated from familiar words. During this period, the students learn the first four A-LM Dialogs orally.

The six sequences shown are: (1) rote learning of the alphabet and students spelling their last name; (2) first exposure to written French when the teacher passes out lists of sentences; (3) a drill on isolated words; (4) an explanation of procedure and the first dictée; (5) students practicing a single sound found in words now familiar to them (oi); and (6) students contrasting a sound taken from words learned orally (regular "o" and nasal "õ"). (This includes duplication of short segments from ML 500, 506 and 803.)

ML 804 can be used to discuss:

- *a) objectives and procedures related to rote learning;*
- *b) students' reactions to their first encounter with the written language;*
- *c) considerations involved in making a decision about the nature of written materials to be used in early reading-writing exercises;*
- *d) objectives and procedures in conducting drills of isolated words;*
- *e) short range vs. long range goals of dictation work; and*
- *f) steps involved in teaching sound-spelling generalizations.*

VOLUME ML 805 (58 minutes)

This volume illustrates the use of drills. It includes examples of three basic kinds used in audio-lingual classes; namely, repetition, substitution, and response drills.

Sequences used include drills related to the verbs *avoir* and *aimer*, the conjugation of regular "er" verbs, and drills involving five prepositions.

ML 805 can be used to discuss:

- *a) objectives and procedures involved in using each of the three types of drills;*
- *b) ways of maintaining student interest throughout drill sessions;*
- *c) the use of drills to reinforce dialog learning;*
- *d) the purposes of individual and whole-class responses during drills;*
- *e) planning drill exercises;*
- *f) the nature and timing of grammar explanations;*
- *g) the extent and nature of teacher corrections of student errors during drills; and*
- *h) the importance of overlearning drills.*

VOLUME ML 806 (57 minutes)

This volume focuses on the teaching of grammar. It includes sequences from six different class periods (spread over a period of eighteen days) to show the progression from the introduction of the indefinite article and gender to the introduction of the definite article. The teacher's reactions to each section are included. (It duplicates short segments also contained in ML 500, 501, 503 and 506.)

ML 806 can be used to discuss:

- *a) ways of introducing and developing an understanding of a point of grammar;*
- *b) the nature and extent of explanations to be given to support usage;*
- *c) ways of generating and sustaining students' interest during grammar learning;*
- *d) the extent to which English should be used in teaching grammar;*
- *e) students' progress in understanding and applying grammatical generalizations; and*
- *f) the development of lesson plans involving the teaching of grammar.*

VOLUME ML 807 (58 minutes)

This volume contains a number of sequences relating to the problem of maintaining student interest in the learning of elementary language skills. For this tape, sequences were selected for the purpose of showing lighter moments in a beginning language class.

The sequences include: (a) a drill involving the use of prepositions; (b) a counting drill session; (c) a game of "Voilà;" (d) a slide show presented by the teacher; (e) warm-up activities including a report by the French Club representative; and (f) the teacher's further description of the organization of French Club and its activities, as recorded after class. (It duplicates short segments of content included in ML 805.)

ML 807 can be used to discuss:

- *a) the use of visuals to provoke and maintain interest in drill activity;*
- *b) teacher personality as related to classroom atmosphere and level of interest;*
- *c) games as a learning and motivational device;*
- *d) slides as a means of including French culture as well as a means of promoting interest; and*
- *e) French Club, its relationship to French classes and its role in promoting interest in learning French.*

Perhaps its greatest usefulness would be realized if it were used with other tapes in this group to show that the class was not "all work and no play," an impression which might well have been created by the segments selected for other volumes.

FRENCH IV

OVERVIEW

Two sets of tapes were made featuring different teachers and different French IV classes. The first set, which was recorded in the fall of 1967, shows intermittent activities occuring over a six-week period in a class taught by Mr. Harry Martin of the Edina Public Schools, School District #273, Edina, Minnesota, a suburb of Minneapolis. The students have progressed to Level IV mainly through a modified audio-lingual approach to the learning of language skills. As in the case of the French I tapes, the user is offered a choice of two editing formats:

The following tapes are relatively unedited; each shows a complete lesson:

Volume	Subject
ML 550	Introduction of activities in which teacher sets the foundation for group work and gives a course overview.
ML 551	Second day of activities during which teacher sets the foundation for group work and gives a course overview.
ML 555	A complete lesson on Vocabulary, with class presentations.
ML 556	Second day on Vocabulary, with class presentations.
ML 557	Discussion of short story, "Le Renard" by Colette.

These tapes may be used individually for a variety of general analyses or in combination with the following topical tapes:

ML 830	1st and 2nd days of group work.
ML 831	3rd and 4th days of group work.
ML 832	5th and 6th days of group work.
	(These three topical tapes may be used individually or in combination with ML 550 and 551 to analyze the development of a group work program.)
ML 833	Individualized instruction in group work.
	(This tape represents further editing of ML 830-832 to combine, for analysis, the teacher's work with individual students in a group work setting.)

Volume	Subject
ML 834	Presentation of student skits. (Students received instructions as to what they were to do and then acted out a portion of "Le Renard" over a two-day period. This tape may be used alone for general analysis, in combination with ML 555-556, dealing with the vocabulary, and/or ML 557, showing the class discussion of this short story, or as part of the total series to analyze progression in group work or class work with a short story.)

The class consists primarily of senior women of above average ability. Each tape is accompanied by the following supplementary materials:

1. Guide for locating important events on the tape.
2. Suggestions pertaining to the use of each tape, including illustrative discussion questions.
3. Background information:
    - (a) description of class background in French and of content of the course;
    - (b) instructor's comments on the teaching of reading
    - (c) list of materials students are engaged in preparing during group activity;
    - (d) sample study guide prepared by students to accompany reading and discussion;
    - (e) sample work sheet (on cognates) prepared by students;
    - (f) unit test, key, and interpretation by the teacher (the test is student-prepared).

The second set of tapes (Volumes ML 561-564), recorded in the fall of 1968, shows the first four days of an advanced language class conducted in the St. Louis Park High School, School District #283, St. Louis Park, Minnesota, a suburb of Minneapolis. The teacher is Mrs. Janet Campbell. The tapes are unedited; each shows a complete lesson.

These tapes lend themselves to an analysis of the process of re-orienting students to language study after a summer vacation, of pacing techniques, stimulation of student interest, means of developing speaking skills, as well as the variety of activities used by the teacher within each class period.

The first day's class contains sufficient activity conducted in English to permit interpretation by a student unfamiliar with French; thus, it is of value for general methods instruction to consider one teacher's approach to the "first day" -- the kind of image she presents, the kind of student response she evokes. ML 564 can be used for an analysis of one teacher's approach to oral practice in an advanced language class.

For those users wishing to focus on the development of speaking skills, a topical tape, ML 835 is offered. It combines related segments from ML 561-564 to illustrate the variety of techniques used by the teacher over a four-day period to stimulate oral practice and to evaluate oral proficiency in a foreign language.

The class is composed primarily of above average senior women. Each tape is accompanied by the following supplementary materials:

1. Guide for locating important events on the tape.
2. Background information on the class.
3. Suggestions pertaining to the use of the tape, including illustrative discussion questions.

Mrs. Helen Jorstad, language teacher working in the Northfield Public Schools, served as a special consultant in the selection and editing of the tapes.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES ML 550 - ML 551

In these tapes, the teacher gives a course overview and lays the foundation for group work by introducing the aims of and procedures for class work with short stories. The exercises used by the teacher are to further the development of reading skills.

ML 550 (45 minutes): The class begins by reviewing last year's reading and vocabulary study. The teacher discusses: (a) the kinds of vocabulary likely to be encountered in short story study; (b) those aspects of a short story which must be understood in order to understand the story's essential meaning -- the situation, the "milieu;" (c) the difference between active and passive vocabulary and how to develop each; and (d) the guidelines for the exercises the students are to prepare as well as how student groups may present their materials to the class.

ML 551 (34 minutes): This tape shows the second day in which the class prepares for group work with short stories. Each group of three students has already read its assigned story and will soon begin to determine how it can best be presented to the rest of the class. The teacher suggests ways of assembling materials, sources for reference, and asks that quizzes and discussion questions be prepared for other students in the class.

ML 550-551 can be used to discuss:

- *a) organization of materials for advanced foreign language classes;*
- *b) long-range objectives of reading in advanced classes;*

c) types and methods of vocabulary study in advanced classes;
d) a teacher's adaptation of procedures as well as to analyze student understanding of and response to a class conducted entirely in French;
e) "milieu" as it relates to the understanding of a short story set in another country;
f) sources of materials; and
g) ways in which a teacher can lay a foundation for work in small groups.

These relatively unedited tapes, each showing a complete lesson, may be used individually for a variety of general analyses, or in combination with ML 830-832 to illustrate and analyze one teacher's approach to group work in the classroom.

VOLUMES ML 555 - ML 556

These tapes are centered around class presentation of vocabulary. The volumes illustrate how the teacher uses materials prepared by student groups to present to the class the setting and vocabulary necessary for understanding the short story "Le Renard" by Colette. The teacher comments at the end of each session. The two sessions prepare the students for a discussion of the short story (ML 557) and for the presentation of their skits (ML 834).

ML 555 (52 minutes): The teacher presents vocabulary and a description of the story background, using pictures and objects to introduce new and difficult words. He explains how students are to criticize, on paper, his presentation and the work of the group who prepared the materials for him. At the end of the period he asks about the words they have written. There is a discussion about love and treatment of animals and the meaning of "tame."

ML 556 (45 minutes): The teacher continues the introduction of vocabulary encountered in the short story using real objects as visual aids. He starts the class on the study of cognates. In the interview, following the class period, the teacher explains his view on translating in a beginning class and in an advanced class.

ML 555-556 may be used to discuss:
a) alternative methods of vocabulary study in an advanced foreign language class;
b) a teacher's use of audio-visual aids in an advanced language class;
c) ways of evaluating student comprehension of and participation in class activity;
d) the use of student-prepared materials;
e) the importance of translation in the advanced foreign language class; and
f) comparisons and contrasts between two days of vocabulary study.

These tapes are relatively unedited; each shows a complete lesson so they may be used individually for a variety of general analyses. In combination with ML 557 and ML 834 they may be used for evaluation and analyses of one teacher's approach to presenting a short story to the class.

VOLUME ML 557 (52 minutes)

The class discusses Colette's "Le Renard" in this relatively unedited tape of a fourth-year French class. It can be used alone to show a complete lesson for general analysis but the difficult vocabulary work on the story, shown on ML 555 and 556, serves as the background for this day of class discussion. The students are told they are to act out the last half page of the story (ML 834).

Following a free discussion of the long weekend just past, the teacher tries to develop class discussion of the story. He comments, questions, has students read aloud and finally begins working through the story using the guide questions. An interview with the teacher about the day's work follows the class period.

ML 557 may be used to discuss:

- *a) the reasons for vocabulary study;*
- *b) methods by which a teacher may lead a class discussion;*
- *c) the lack of response in some classes and ways to find a remedy;*
- *d) the range of difficulty and suitability of materials for a class;*
- *e) short-term and long-range objectives of reading in the advanced foreign language class; and*
- *f) the type and extent of planning necessary for a teacher to lead a discussion.*

VOLUME ML 561 (41 minutes)

This volume illustrates one teacher's activities on the first day of school in an advanced foreign language class. Unedited, it shows the entire class period and includes sequences showing descriptions by the teacher of the course, of books and materials to be used and ground rules for operation of the class. (Volumes ML 562-564 show the next three days.)

ML 561 may be used:

- *a) to consider the place of the four language skills in the fourth-year class;*
- *b) to assess the role of English in the advanced class;*
- *c) to discuss the ways in which a class forms impressions of a teacher during the first class period;*

d) *to consider the need for and nature of ground rules for the conduct of a senior high class; and*
e) *to assess the variety of backgrounds students bring to a fourth-year class and discuss ways of meeting individual needs.*

As this class period is conducted in English, it could be used for general methods instruction to analyze a teacher's approach to the first day in the classroom.

VOLUMES ML 562 - ML 564

This series of unedited tapes show the second, third and fourth day in an advanced foreign language class; they are intended to supplement ML 561. *They may be used individually, or as a series with ML 561, to show reorientation to language study following summer vacation.*

ML 562 (52 minutes): French names are assigned to the students and the alphabet is reviewed as part of warm-up activities. Half the class record their essays about their summer activities and the teacher explains the class's first major assignment.

ML 563 (55 minutes): Again the emphasis is on the development of speaking skills; the rest of the class record their essays about summer activities and the teacher comments on them. An assignment is made to discuss a picture in French. The students are given a few minutes to prepare their talks with a minimum amount of help from the teacher. The students make their presentations and the teacher corrects and comments.

ML 564 (53 minutes): This tape includes three different devices used by the teacher to encourage every student to speak French: they devise questions that go with given responses; they describe a person in the room for classmates to identify; and then each one describes a famous person for class identification.

ML 562-564 may be used to discuss:
a) *the role and pacing of warm-up activities in an advanced French class;*
b) *the part played by the teacher's correction of student errors in the development of speaking skill;*
c) *the use of a language laboratory for initial tape recordings by a fourth-year class;*
d) *techniques for encouraging every member of a class to speak French;*
e) *the importance of clarity in class assignments and the means of making an assignment clear;*

f) the extent to which and the means by which a teacher can evaluate speaking proficiency of individuals in a class;
g) the place of English in the advanced foreign language class;
h) teacher-student rapport;
i) the image presented by this teacher and the factors accounting for it; and
j) this teacher's probable approach to other language skills during the year.

VOLUMES ML 830 - ML 832

These tapes show group work activities of a Level IV French class over six class periods. They focus on the teacher and small student groups working with short stories.

ML 830 (31 minutes): This tape shows the first and second days of group work with particular emphasis on the teacher and two groups.

ML 831 (41 minutes): The third and fourth days of group work are shown on this tape; a new student is admitted to the class. Focus again is primarily on the two groups shown in ML 830. The tape also includes a section where the teacher is out of the room.

ML 832 (42 minutes): This tape shows the fifth and sixth days of group work. The teacher discusses: the use of guide questions to point to difficult passages; the exercises and tests the groups are to be constructing; and what the group whose materials were inadvertently destroyed (while in the teacher's possession) should do to replace it. The students work in groups with the teacher moving about making suggestions; he admonishes a student who has not been working.

These tapes may be used:
a) individually for general analyses and to illustrate group work activities in a class;
b) in the series of three to illustrate sequential group work activities; or
c) as a supplement to ML 550 and 551 which illustrate the preparation for and laying of the foundation for group work.

ML 830-832 also can be used to discuss:
a) sources and organization of reference materials in a foreign language;
b) the objectives of group work;
c) the role of the teacher as a resource person for group work;
d) the activities of two groups in terms of what they seem to accomplish;

e) *the influence of the teacher on use of French by students in advanced foreign language classes;*
f) *student-student and teacher-student interaction in groups;*
g) *the teacher's role in maintaining pace and motivation in group work;*
h) *the use of English in a Level IV French class; and*
i) *alternative methods of presenting results of group research to a complete class.*

VOLUME ML 833 (56 minutes)

This volume illustrates one teacher's approach to individualized instruction, through small-group activity, in an advanced foreign language class. The tape includes sequences from six class periods devoted to group activity (excerpts from ML 830-832).

The main focus is on six students working in two different groups to illustrate how the teacher works with individuals within the framework of group activities.

ML 833 may be used to discuss:
a) *the use of English in the advanced foreign language class;*
b) *the extent to which class objectives may differ from the objectives of individuals within the class;*
c) *ways in which a teacher may approach individual needs through small-group activity;*
d) *the nature of the teacher's work with small groups and with individuals within the groups;*
e) *means of individualizing class work outside the framework of small groups; and*
f) *individualization as it applies to evaluation procedures in the advanced French class.*

VOLUME ML 834 (55 minutes)

In this tape, covering parts of three class periods, random groups of students are acting out the final half-page of Colette's "Le Renard" which they have been studying. They have spent two days on difficult vocabulary (ML 555 and 556) and most of one day in class discussion (ML 557).

The students are advised how they are to write out their criticisms; they and the teacher evaluate the performances and assign a letter-grade to the students who present the skits. Considered an unsuccessful first day with the assignment, the teacher gives it again. The tape shows the skits done on the succeeding two days; the teacher assigns parts as each skit is to be presented and discusses the performances. It also includes an interview with the teacher, who discusses the work of the entire unit as well as that of the rest of the year.

ML 834 can be used to discuss:

- *a) methods of evaluating reading in an advanced class;*
- *b) the effectiveness of acting as a means of encouraging students to put themselves into the situation of a story as they read;*
- *c) the priorities of the four language skills in a Level IV French class;*
- *d) the role of translating in beginning and advanced language classes; and*
- *e) the progress of an entire class in a unit's work and to try to set it into the context of the year's course.*

VOLUME ML 835 (53 minutes)

This volume demonstrates work with speaking skills in an advanced foreign language class. The excerpts are from four class periods at the beginning of a new school year.

Sequences were chosen from ML 561-564 to illustrate a variety of techniques an advanced language teacher may use to stimulate oral practice in the classroom. They include informal conversation, a tape-recording session of summer activities, student descriptions of a picture, and descriptions of students in the class and of famous people.

ML 835 may be used:

- *a) to stimulate discussion about techniques a teacher can use to conduct conversation practice;*
- *b) to discuss the adaptation of a technique to classes at other levels of French;*
- *c) to consider the teacher's adaptation of a technique to the needs of a particular class;*
- *d) to consider the range of fluency in the fourth-year class and the means by which a teacher can consider each individual's progress in speaking;*
- *e) to evaluate the extent to which the language laboratory can help to evaluate and promote speaking proficiency; and*
- *f) to consider the ways in which a teacher can help students to overcome inhibitions about speaking another language.*

ELEMENTARY GERMAN

OVERVIEW

All of the nine tapes in this category were made in cooperation with the Robbinsdale Public Schools, District #281, Robbinsdale, Minnesota, a suburb of Minneapolis. Dr. Hedi Oplesch, District Foreign Language Consultant, played an important role in determining the kinds of tapes to be recorded. The fourth and fifth grade classes which were taped were using materials prepared by Dr. Oplesch entitled, Hand in Hand ins Kinderland published by Independent School District #281 in 1967 (first revised edition). The seventh and eighth grade classes were working with Deutsch: Verstehen und Sprechen by Rehder, Thomas, Twaddell and O'Connor published by Holt, Rinehart and Winston, New York, 1962. The material for the tapes was recorded in the fall of 1967 in a variety of Robbinsdale Public Schools. Most of the students shown were continuing German as an elective and had had FLES German in the same school system.

With the exception of ML 001, the tapes were edited by Dr. Shirley Krogmeier of the University of Minnesota, Minneapolis. As in the case of the French tapes, the editor prepared tapes of two types. The following are relatively unedited and can be used alone for general analyses:

Volume(s)	Subject	Grade	Teacher(s)
ML 001	The class views a television lesson with pre and post-television activities; then has breakfast the next day with the TV teacher as a guest.	4	Mrs. Sandra Sommers Dr. Hedi Oplesch (TV Instructor)
ML 002	Comparison of two classes, both of whom are learning about Christmas customs in Germany.	5	Miss Alexandra Tkach Mrs. Claudette Schluck
ML 200-202	Second, third & fourth lessons on Chapter 4 of the text including work with a dialog.	7	Mrs. Diane Arneson
ML 203	Comparison of work done on the same lesson by a two-mod laboratory class of thirty-five pupils with that of a one-mod small group which meets twice with a two-day interval.	7	Mr. Donald Wolter

Inasmuch as ML 200-202 show three successive days of work by the same class, using them as a series provides additional opportunities for analysis.

The editor also prepared the following topical tapes all showing an eighth grade class and their teacher, Miss Inta Stolcers:

Volume	Subject
ML 850	Sequences related to warm-up and review activities.
ML 851	Sequences illustrating use of resources supplementary to text to prepare for skits.
ML 852	Sequences showing activities designed to help pupils prepare skits and the skits themselves.

These tapes may be used individually; however, if used as a series, they show progression, over six class periods, in preparing skits which serve as the culminating activity for the unit.

All of the tapes are accompanied by the following written supplementary materials:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUME ML 001 (55 minutes)

This volume features a class of 4th graders who are studying German in a midwestern, suburban elementary school. Sequences from two consecutive class periods are shown. The first includes a television lesson along with pre-television and post-television activities conducted by the regular teacher. The next day the class serves and eats a German breakfast; one of the guests is the television teacher who conducts review activities after they have finished eating.

This tape can be used to discuss:

a) *the process of laying a foundation for a television lesson;*
b) *techniques used by the television teacher which may be applicable to regular classroom teaching;*
c) *the general effectiveness of teaching a language to young children via television;*

d) *the follow-up of the television lesson by the regular teacher;*
e) *the educational and motivational value of having a German breakfast for 4th grade pupils;*
f) *review procedures employed by the television teacher;*
g) *the use of visual aids in teaching and reviewing language skills; and*
h) *teacher personality as related to the motivational level of pupils.*

VOLUME ML 002 (52 minutes)

This tape shows two fifth grade German classes on the fourth day (Thursday) of a five-day unit on Advent in Germany taken from the text, Hand in Hand ins Kinderland. The children have seen pictures of Advent customs and learned an Advent rhyme presented over the educational TV network on Monday and Wednesday. On Tuesday they practiced the vocabulary and grammar presented on TV and worked on an Advent calendar. The TV show on Friday will feature a reading with illustrations of "The Goose Girl of Nűrnberg," an encounter between Albrecht Dűrer and a young girl. Both teachers use the same basic format: warm-up, review of old material, and cultural activity; however, the content and techniques are different.

ML 002 can be used to stimulate a discussion of:
a) *the apparent behavioral goals of the two lessons;*
b) *how subject matter can be related to the lives of the pupils;*
c) *how pupils can be led to active involvement in the lesson;*
d) *the involvement of the pupils in different parts of the lessons;*
e) *the extent to which each of the lessons meets the general goals of foreign language education: cultural, listening, speaking, reading and writing;*
f) *what kinds of things pupils apparently enjoy doing;*
g) *the use of repetition and its effect on performance; and*
h) *how the lesson could be best related to the reading of "The Goose Girl of Nűrnberg" the next day.*

ML 002 should be equally useful in an undergraduate course in methodology of FLES education, in graduate courses in methodology, foreign language curriculum development or instructional techniques.

VOLUMES ML 200 - ML 202

These tapes show three consecutive class periods where the main focus is on Chapter 4 of the text, Verstehen und Sprechen. They illustrate a modified audio-lingual approach to the teaching of language skills. The students are working on a dialog; the first four lines were introduced and practiced the day before.

ML 200 (49 minutes): The tape begins with warm-up activities which include addressing questions to individual students about family and health. The first four lines of the dialog are reviewed, using a variety of techniques. Following the introduction of the next four lines of the dialog, the teacher uses various ways to have the class practice the dative forms of the definite article and then reviews the accusative forms of the indefinite article.

ML 201 (53 minutes): Warm-up activities for this class include questions about family and health, names of students in the class, a review of colors and the first eight lines of the dialog. New sentences of the dialog are presented and drilled with a great variety of techniques being used. This is followed by a review of previously learned material, assigned reading and pattern practices. Some students read prepared written assignments based on a teacher-made outline in the form of interview questions.

ML 202 (51 minutes): The class begins with a warm-up concerning questions about health. Students are then asked to give varying responses to the question, "How is Rolf?" The next lines of the dialog are introduced and previous lines reviewed. The concept of short and long "i" sounds is introduced with variant spellings. A transparency of previously learned material is shown with the "i" words missing. Students are asked to read the sentences and supply the missing words. This is followed by a dictation test. The final activity is a "baseball game" with questions of varying difficulty on all material previously studied.

ML 200-202 can be used to stimulate discussion of:

a) *kinds of audio-visual materials and ways of using them;*
b) *how student errors can be handled;*
c) *some ways of encouraging internalization of language patterns;*
d) *the use of grammatical explanations in the classroom;*
e) *kinds of activities students seem to enjoy most;*
f) *the development of reading skills;*
g) *how known words can be used to illustrate phonic contrasts; as well as*
h) *the advantages and disadvantages of "fast pacing," choral repetition, and backward build-up.*

They also illustrate techniques for:

a) *using directed dialog;*
b) *presenting new materials; and*
c) *presenting a dictation and reducing error in "free writing" assignments.*

ML 200-202 should prove useful in an undergraduate course in the audio-lingual method of language instruction; in a graduate course evaluating the effects of audio-lingual instruction and/or in analyzing student response to different techniques of instruction; and in an in-service program for teachers of beginning languages.

VOLUME ML 203 (55 minutes)

This tape was made over a three-day period to compare the work of a two-mod laboratory class of thirty-five pupils with another one-mod small group which meets twice with a two-day interval. In the seventh grade, the pupils are all studying the fourth chapter of Verstehen und Sprechen.

The first segment of the film shows the two-mod class. The class begins with a warm-up, a review of Dialog 4, and a replacement drill. A vocabulary expansion exercise follows, in which students describe themselves and each other in response to a question in German. A list of possible responses is projected on an overhead. Students then read a supplementary dialog and questions are asked on the context; one student writes answers on the board. The final activity is a spelling game, "Hangman."

The second and third parts of the tape show the one-mod small group session working on the same unit of material as the two-mod class. There is a warm-up and review of previously practiced parts of the dialog. The last lines of the dialog are introduced with the teacher demonstrating the meaning using realia, but no English. Pronunciation is practiced extensively. With the teacher giving cues using the overhead and a set of keys, the class practices various prepositional phrases showing location. Two days later the same small group meets for follow-up and expansion activities. Various stage props are used and the students become more involved by playing the role of teacher. Later a pair of boots is hidden and blindfolded students try to guess where they are, using the prepositional phrases practiced before.

ML 203 can be used to stimulate discussion of:

- a) *how large and small group instruction can be used effectively;*
- b) *what kinds of activities are more suitable to large or to small groups;*
- c) *the advantages and disadvantages of illustrating contextual meaning without the use of English;*
- d) *effective use of the overhead projector;*
- e) *types of activities that encourage active student involvement;*
- f) *what kinds of activities lead to "natural" use of the language; and*
- g) *the effect of repetition on pronunciation and the possibility of there being an optimum point after which little improvement is made.*

ML 203 should prove useful for undergraduate courses in foreign language methods, for graduate students studying the effect on class response of different kinds of activities, and for in-service seminars on classroom techniques.

VOLUME ML 850 (49 minutes)

This tape shows several different kinds of warm-up and review activities used in an eighth grade German class over a period of three school days.

The students are beginning Chapter 14 of Verstehen und Sprechen, "In der Grünen Eule" which is about eating in a restaurant. The warm-up activity concerns weather, swimming, time and foods which leads into the dialog. The second segment on the same day shows the class reviewing items of clothing, colors and pronouns. The second day's warm-up activities show students reading questions from cards and other members of the class answering. Then the song, "Es, Es, Es" is used to practice pronouns. On the third day the teacher uses "free recall," stimulated by action pictures, as the warm-up activity.

ML 850 can be used to stimulate discussion of:

a) kinds of activities that can be used for warm-up and review;
b) the use of audio-visuals to stimulate responses;
c) the use of warm-up and review activities to lead into new material;
d) how students can be actively involved in the lesson: and
e) the types of activities that most likely lead to internalization of structure and natural use of the language.

This topical tape should prove useful for undergraduate foreign language methods classes where students can use the ideas presented in this tape as stimuli for finding or creating review materials of their own, and for in-service seminars on classroom techniques.

VOLUMES ML 851 - ML 852

This series shows the same eighth grade class as does Volume ML 850. The class is studying Chapter 14, "In der Grünen Eule" from Verstehen und Sprechen. The tapes show activities, over a period of four days, using resources supplementary to the text material designed to help students prepare for the culminating activity--the writing and performing of skits.

ML 851 (50 minutes): A guest speaker gives a slide presentation on German eating places and customs. The following day the teacher hands out and discusses German menus with the students.

ML 852 (47 minutes): Two days later, table setting vocabulary is reviewed. Later, during the same class period, ordering food in a restaurant is reviewed and instructions are given for skits to be presented the next day. The following day students perform their skits.

These tapes can be used to stimulate discussion of:

a) *what the students need to know and what skills they need to have in order to do the culminating activity;*
b) *how to go about writing behavioral objectives for a culminating activity such as this;*
c) *how effectively the students made use of the preparatory activities;*
d) *what can be done to encourage more use of material practiced in the preparatory activities; and*
e) *how the teacher's behavior or attitude in the segment showing the skits might have influenced the performances.*

ML 851 and 852 should prove useful for an undergraduate foreign language methods class, for graduate students studying the effect of teacher attitude on performance, and for in-service seminars on culminating activities.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (AAAS)

OVERVIEW

Four tapes made in cooperation with the American Association for the Advancement of Science have been selected for distribution:

Volume(s)	Subject	Grade	Teacher
S 020-022	Separating Materials from Mixtures	2	Mrs. Bonnie Hewitt
S 023	Identifying Materials	6	Mr. Jeff Kosmoski

The series of three tapes, Volumes S 020-022, was selected by the AAAS staff to show a complete exercise based on the AAAS format. The fourth tape, S 023, features a class which is using AAAS materials but its greatest usefulness lies in provoking a discussion of group work techniques with sixth graders.

All of the tapes were made in cooperation with School District #284, Wayzata Public Schools, Wayzata, Minnesota, a suburb of Minneapolis. The taped material was recorded in the spring of 1970; both classes are heterogeneous.

Each tape is accompanied by the followed written supplementary materials:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

The text used by the classes is Science -- A Process Approach, published by AAAS in 1968.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES S 020 - S 022

This series of three tapes features a second grade class studying Part C, Classifying 9, "Separating Materials from Mixtures," an exercise from the AAAS textbook.

S 020 (51 minutes): Part I of this tape shows the introduction and Activity 1 of the exercise. In the introduction, the teacher poses a problem by showing the children a mixture of gravel, clay, and sand and asking them to think about how they would separate the mixture into its components. In Activity 1 the children separate a simpler mixture (marbles of different sizes) by hand and with an open-bottom expanding trough. They compare the results. For these activities, the degree of direct teacher involvement varies. Small groups of children work independently in separating the marbles by hand. With the open-bottom expanding trough all the children group together and work with the teacher.

Part 11 shows most of Activity 2 in which the children separate a mixture of gravel and two sizes of sand with a graded screen. They work in pairs and take turns using the graded screen.

S 021 (56 minutes): This tape shows the class as it finishes Activity 2 and carries on Activity 3 in which groups of four children work with a graded set of sieves to separate the same mixture. Then they make quantitative measurements of the weights and volumes of the components. They arrange the components of the mixtures according to weight and volume, from least to greatest.

S 022 (57 minutes): Part 1 of this tape shows the appraisal activity. While students work on their own, the teacher observes how well the children, working in their own groups of four, are able to do what the objectives specify. Part 11 shows most of the Generalizing Experience in which the teacher and pupils discuss various ways of keeping animals separated in a zoo. Part 111 shows the Individual Competency Measure in which the teacher gives a girl a mixture, the three separating devices, an equal-arm balance, and a graduated cylinder. She asks the girl to carry out, in turn, each of the tasks called for in objectives. The tape shows the girl's performance and her interaction with the teacher.

S 020-022 would be most useful if used in a series to show a complete exercise based on the AAAS format. The material can promote discussions of various classroom interactions among the children, the children and the teacher, and the science materials. Also, they could serve as a supplementary resource for several of the sessions in Science-A Process Approach, Guide for Inservice Instruction, such as the sessions "Preparing to Teach an Exercise" and "Assessing Student Performance."

VOLUME S 023 (34 minutes)

This tape features a sixth grade class working on Part E, "Interpreting Data 2--Identifying Materials," as developed by AAAS. The first sequence shows pupils as they begin work on conducting twelve tests involving combinations of liquids and powders. They are working in groups of four.

Some students are to perform the tests while other record the results on a data sheet. The second sequence shows the groups of students finishing their tests and attempting to transfer results to punchcards, as another means of storing information for easy retrieval. Much of the content focuses on two groups so that viewers can follow their progress.

S 023 could be used to familiarize teachers or prospective teachers with this particular unit prepared by AAAS; however, it would probably be most useful if used as a springboard to discussing the problems and advantages of having sixth graders work in groups.

ELEMENTARY SCIENCE STUDY (ESS)

OVERVIEW

The six tapes in this category, featuring one teacher who was using materials prepared by the Elementary Science Study, were made in cooperation with School District #280, Richfield Public Schools, Richfield, Minnesota, a suburb of Minneapolis. The tapes show two different fifth grade classes taught by the same teacher, Mr. David Legvold.

Volume(s)	Subject
S 001-003	Small Things Unit
S 004-006	Kitchen Physics Unit

In each case, the teacher is using materials prepared by the ESS, published by the Webster Division, McGraw-Hill Book Company, 1967. The class activities were recorded in the fall of 1969; both classes are heterogeneous.

Any of these tapes may be used singly or in series. To realize maximum benefits, viewers should first familiarize themselves with the ESS materials and, perhaps, devise plans showing how they would approach the teaching of the material. This would permit them to compare their plans with the strategies employed by the teacher.

Each tape is accompanied by the following supplementary materials:

1. Guide for locating important events on the tape.
2. Background information to provide a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

Unless the user has some special reason for preferring to deal with the "Small Things" unit, Project Staff (including Mr. Richard Clark, Minnesota State Science Consultant who served as special consultant in the editing of the tapes) tend to favor the "Kitchen Physics" series as the one which is likely to provoke more discussion.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES S 001 - S 003

The fifth grade students shown on these tapes are studying Small Things - An Introduction to the Microscopic World. Each of these tapes shows segments taken from three class periods; together they cover the first nine days spent on the unit.

S 001 (59 minutes): At the beginning of the first day the teacher discusses with the students what is meant by small things. After developing the concept of smallness, students use a water drop magnifier and a simple hand lens to look at several examples of small non-living things. The following day they use their ESS microscopes to again look at some examples of non-living things. On the third day, the students hypothesize as to what they think the inside of an onion might look like. After several students make diagrams on the board to show what they think an onion looks like inside, the teacher cuts an onion and has students compare the real onion with the drawings. In the last part of the tape students use their microscopes to look at onion skin cells.

S 002 (57 minutes): This tape contains segments of the next three days' work. In the first part of the tape students are using a hair to measure the size of the onion cells. Later, they stain the onion cells to help bring out the different structures within the cell. Following a discussion of what the students have observed in the onion cells, the teacher introduces the examination of epithelial cells. Then the class moves to the study of protoza and the observation of samples of pond water.

S 003 (48 minutes): This tape contains segments of the next three days' work. In the first part, students discuss what they saw in the pond water the previous day. Following this, students undertake experiments of their own design to learn about some of the life functions of protozoa. After a discussion of some additional properties of protozoa, the students again perform experiments of their own design. The tape ends with a discussion of the experiments performed by students.

VOLUMES S 004 - S 006

The fifth grade students shown in these tapes are studying the Kitchen Physics Unit. Viewers should be asked to familiarize themselves with the unit and to devise their own teaching plans before viewing the tapes.

S 004 (39 minutes): Students are introduced to the unit and begin work on Investigation #1. The teacher distributes eye droppers and three liquids (water, soapy water and oil). Pupils are to study the properties of different kinds of drops. The tape contains excerpts from two class periods to show the complete lesson from the pre-lab and lab through the post-lab activities.

S 005 (47 minutes): This tape shows the students as they do Investigation #2, "Bottles and Streams." The teacher and students prepare their room for what turns out to be a rather messy activity. The teacher leads into the main activity by having students use metronome strokes to measure the length of time it takes to empty bottles through various sized holes. Then they move to the task of using strips of black paper to record the length of water columns.

S 006 (51 minutes): This tape shows the pre-lab, lab and post-lab activities related to Investigation #5 which involves determining the "grabbiness" of four liquids: water, soapy water, oil and alcohol. Students convert the ESS balances with which they have been working to tensiometers for this experimentation.

Volumes S 001-006 can be used in either pre-service or in-service settings to discuss a variety of general topics related to the teaching of fifth graders. Specific uses related to the teaching of science are:

a) to discuss efficient ways of distributing and collecting equipment in a classroom which has desks but no sinks or other laboratory facility;
b) to compare the teaching strategies of this particular teacher with those previously designed by the viewers themselves;
c) to consider the role of the teacher in inquiry activities;
d) to attempt to identify inquiry activity on the part of the students;
e) to discuss ways of collecting, categorizing and interpreting data;
f) to observe the behavior of fifth graders in a relatively free atmosphere;
g) to discuss the pre-lab, lab, post-lab model of science instruction; and
h) to consider the extent to which these lessons are representative of the Elementary Science Study philosophy of teaching science.

MINNESOTA MATHEMATICS AND SCIENCE TEACHING PROJECT (MINNEMAST)

OVERVIEW

Five tapes featuring classes using MINNEMAST materials have been selected for distribution.

Volume(s)	Subject	Grade	Teacher
S 010-011	Unit 9: Numbering and Counting	1	Mrs. Nancy Stone
S 013-014	Unit 15: Investigating Systems	2	Miss Margaret Bauer
S 015	Unit 22: Parts and Pieces	3	Miss Elizabeth Byrne

All of these tapes were recorded in the fall of 1969 in cooperation with the Minnesota Mathematics and Science Teaching Project and School District #625, St. Paul Public Schools, St. Paul, Minnesota. All of the classes shown are heterogeneous.

Other things being equal, users may wish to give preference to Volumes S 013-014, inasmuch as the class shown contains several youngsters who have psychological problems. This creates special classroom organization problems for the teacher which may be profitably discussed, especially by pre-service teacher candidates.

Supplementary materials provided with each tape include:
1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative discussion questions.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES S 010 - S 011

These tapes show a first grade class which is studying Unit 9: "Numbering and Counting," of the MINNEMAST materials. In each case, the entire lesson is shown without editing so that features such as the interest span of the children and the pace of the activity can be discussed. It would probably be wise to delete some of the material if the tape is being reviewed by experienced teachers.

> S 010 (52 minutes): The children are studying Lesson 10, "Number as a Property of a Set." The purpose of the lesson is to associate the number of objects in a set with a numeral. The class follows procedures A and B as described in the MINNEMAST manual.

S 011 (43 minutes): The children are studying Lesson 11, "Recognizing Numbers from 0 through 10." They carry out suggested procedures labeled as Parts A, B, and D in the MINNEMAST manual.

S 010 and S 011 can be used to discuss the philosophy and implementation of MINNEMAST materials as well as a variety of general methods involved in working with first graders. Specifically, they could provide a springboard to discussing:

a) how one determines the appropriate length of an activity or a lesson;

b) how one decides how much freedom one can give pupils in developing their own "styles" of doing things without losing the point of the activity;

c) means of coping with children of obviously varied abilities in mathematics;

d) means of identifying and diagnosing problems children have in carrying out the suggested activities;

e) problems of organizing first graders for group work;

f) the development of a learning atmosphere in a first grade classroom; and

g) the response of children to the MINNEMAST materials as used by this teacher.

If pre-service students are asked to devise a teaching plan for the lesson prior to viewing the taped lesson, they can also benefit from comparing their strategies with those of the teacher and trying to predict how their lessons would have succeeded with this group of children.

VOLUMES S 013 - S 014

These tapes show a second grade class which is studying Unit 15: "Investigating Systems," of the MINNEMAST materials. The lessons are shown in relatively unedited form to permit observations relating to the interest span of the children and the pace of the activity. They are also useful as a springboard to discussing how a teacher can respond to special needs of individual students in a group situation.

S 013 (44 minutes): The children are studying Lesson 12. They carry out Activities C and D in which they are to experiment to find out which of five substances are necessary parts of the system of reacting substances that produces the red color. Then they make the red color disappear. It also shows the way in which this teacher approaches the clean-up procedure after a somewhat messy activity.

S 014 (44 minutes): The children carry out Activity A of Lesson 3 and Activity A of Lesson 4. They explore combinations of three colors (red, yellow and blue) and then they try to find symbols to represent the color mixtures.

S 013 and S 014 can be used to discuss:

- a) the philosophy and implementation of MINNEMAST lessons:
- b) means of determining the appropriate pace and length of a second-grade lesson;
- c) when it is most productive to have pupils work as a class rather than individually;
- d) how to cope with "messy" pupils in this kind of activity;
- e) how a teacher can cope with several youngsters who do not (and probably cannot) conform to group restrictions;
- f) means of organizing second graders for this kind of work; and
- g) organizational approaches to the clean-up process.

If pre-service students are asked to devise a teaching plan for the lesson prior to viewing the taped lesson, they can also benefit from comparing their strategies with those of the teacher and trying to predict how their lessons would have succeeded with this group of children.

S 013-014 could be used in in-service settings although they would probably be more useful for pre-service work. If used in an in-service program, it would probably be wise to delete some of the material.

VOLUME S 015 (44 minutes)

This tape features a third grade class which is studying Lesson 3 of Unit 22: "Parts and Pieces," of the MINNEMAST materials. Children are shown as they carry out Activities A, B, and part of C. Major objectives of the lesson are to learn to associate weight with the number line and to discover that most weights fall between two integral points on the number line.

S 015 can be used to discuss:

- a) this group of students' response to this particular MINNEMAST lesson;
- b) the extent to which the lesson is representative of MINNEMAST philosophy of teaching elementary mathematics;
- c) the pacing of the lesson;
- d) how a teacher decides when it is best to have students work together as a class or to work independently in pairs as assigned;
- e) how a teacher handles disagreements as to what happens in this kind of activity; and
- f) the teaching strategy employed by the teacher.

S 015 would be useful in a pre-service methods class; it is not recommended for in-service programs.

SCIENCE CURRICULUM IMPROVEMENT STUDY (SCIS)

OVERVIEW

A total of fifteen tapes featuring materials prepared by the Science Curriculum Improvement Study Project is available:

Volume(s)	Subject	Grade	Teacher	Location and (Type of School)
S 030	Relativity	4	Miss Alice M. Peterson	Albert Lea, Minn. (urban)
S 040-041	Systems & Subsystems	3	Miss Janice Cornell	Minneapolis, Minn. (inner-city)
S 049-050	Interaction & Systems	3	Mrs. Pamela Sulack	Richfield, Minn. (suburban)
S 055	Material Objects	2	Mrs. Janice E. Love	Richfield, Minn. (suburban)
S 056	Material Objects	1	Miss Sandee Corrigan	Anoka, Minn. (suburban)
S 057-058	Material Objects	1	Mrs. Myrrhene Crawford	Minneapolis, Minn. (inner-city)
S 059	Material Objects	1 1 2	Miss Corrigan Mrs. Crawford Mrs. Love	Anoka (suburban) Mpls. (inner-city) Richfield (suburban)
S 070-071	Organisms	1	Miss Corrigan	Anoka (suburban)
S 079	Life Cycles	2 3	Mrs. Nancy Gripp Mrs. Bonnie Haug	Anoka (suburban) Richfield (suburban)
S 080-081	Life Cycles	3	Mrs. Haug	Richfield (suburban)

There is approximately 28 minutes of duplication in Volumes S 049 and S 050. Volume S 049 shows excerpts from three days' activity to show the invention of the concept of interaction and work with pulleys. Volume S 050 shows a complete lesson which includes the work with pulleys selected for inclusion in S 049.

Each tape is accompanied by the following supplementary materials:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

The content of the tapes was recorded over a period of time extending from the spring of 1970 to the spring of 1971. With the exception of Volumes S 070-071, the teachers shown were using preliminary SCIS materials published by D. C. Heath & Company. Revised editions are or will be available through Rand McNally and Company.

The tapes were made in cooperation with the Science Curriculum Improvement Study and all but Volume S 050 were edited by Mrs. Judith L. VanHoorn of the SCIS staff. Cooperating school districts included the following:

1. District #241, Albert Lea, Minnesota
2. Special District #1, Minneapolis, Minnesota
3. District #11, Anoka, Minnesota
4. District #280, Richfield, Minnesota

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUME S 030 (52 minutes)

This volume shows a fourth grade class studying Relativity, a physical science unit prepared by SCIS. The basic concept of this unit is that the position and motion of an object can only be perceived, recognized and described, with reference to other objects. In a previous activity, the invention of an artificial observer, Mr. O, establishes a central reference object.

The first lesson, Part I on this tape, shows a discovery lesson in which the students use Mr. O to describe the relative position of a block. Part II shows the class two days later involved in an exploratory activity in which a story is read which illustrates the necessity of having a reference object. The following day, Part III, the excerpts from the lesson show the invention of relative motion in which students describe objects which change position.

S 030 can be used to:

a) discuss the concepts presented in the Relativity unit;
b) show exploration, invention and discovery activities;
c) show how one teacher adapts the activities in the unit to her style and class; and
d) provide a basis for discussions of SCIS teaching strategies.

This tape should prove useful in an undergraduate course in science and/or elementary methods, and in in-service training programs for elementary teachers. It might also be used in a general methods course.

VOLUMES S 040 - S 041

The third grade class shown on these tapes is studying Systems and Subsystems, the third unit in the SCIS physical science sequence. In this unit the concept of systems is reviewed and the subsystems concept is introduced. In the third part of this unit, the students study solutions. The emphasis is on the conservation of matter in systems and subsystems which undergo dramatic changes in appearance.

The teacher is using the preliminary edition, the title of the final edition is Subsystems and Variables and most activities, as well as their arrangement, have been changed. In S 040, the class is working on Chapters 6 and 7 which have not been substantively altered in the new edition. S 041 shows work on Chapter 12 of the preliminary edition; though this chapter has been changed, the purpose of the lesson, as well as the type of teaching and student work, make this tape useful for a discussion of SCIS.

> S 040 (47 minutes): This tape shows two consecutive lessons in which the class studies Chapter 6, "Dissolving Sodium Chloride" and Chapter 7, "Sodium Chloride Crystals." In Part I the students begin the experiment by watching sodium chloride interact with water in their tumbler and predict what will happen after the liquid evaporates. Part II shows the second day; the teacher reviews yesterday's activities and then students examine the tumblers to see whether their predictions were correct. The lesson ends with a post-lab discussion.
>
> S 041 (56 minutes): This tape shows excerpts from three class periods where students are working on "Separating Solid Materials." Part 1 shows the class examining crystals which have formed from their previous experiment and reviewing what happened when they combined two solutions. The teacher then repeats the students' experiments and reviews what happened. The second day, Part 11, the students separate the solid material from the system formed when they combined the two solutions. Part 111 shows pairs of students, the third day, presenting their findings to the class.

S 040 and S 041 can be used to discuss:

- *a) classroom activities such as discussion, students' individual work, and teacher demonstrations;*
- *b) questioning techniques;*
- *c) the development of an activity;*
- *d) the role of the teacher in a SCIS class;*
- *e) student-student and teacher-student interaction;*
- *f) the pacing of a lesson;*
- *g) the abilities of some third graders in working with SCIS materials and ways of evaluating this ability;*
- *h) ways for obtaining feedback on students' understanding; and*
- *i) a lesson taught by one teacher compared with the plans prepared by the viewers.*

S 040-041 show how one teacher used SCIS materials in an inner-city school. Although they may be used singly, S 041 will be more significant in a discussion of SCIS materials if both tapes are viewed. They should prove useful in elementary science methods courses, general methods courses and in-service training programs for elementary teachers.

VOLUME S 049 (58 minutes)

In this volume a third grade class is shown studying Interaction and Systems, the second unit in the physical science sequence prepared by SCIS. The invention of the concept interaction and work with pulleys are shown.

The tape includes segments from three days. On the first day the students receive their study guides and work in picture records of experiments they have previously done. The teacher then invents the interaction concept. The next day the class does activities described in the chapter "Evidence of Interaction." The last segment shows the class doing the activity described in the chapter "Exploring Pulleys" (this segment is also shown in S 050).

S 049 can be used in pre-service or in-service science education courses:

a) to familiarize teachers with some activities from the unit Interaction and Systems;
b) to discuss how a teacher adapts the activities as presented in the manual;
c) to compare how one teacher teaches these activities with the lesson plans prepared by the viewers;
d) to discuss the role of the teacher in a SCIS class; and
e) to show an "invention" and a "discovery" lesson.

VOLUME S 050 (43 minutes)

This volume shows a third grade class working with the second part of the Interaction Unit prepared by SCIS. In the previous lesson, students developed an understanding of the concept of interaction through a variety of activities, including experiments with an electrical circuit, a combination of a roller skate, spring and magnet, and by mixing liquids. In this lesson, they are to experiment and invent a systems concept.

The lesson begins with a teacher demonstration of a "mystery box." The children are asked to analyze the workings of the mystery box and to "guess" the nature of the hidden objects which are responsible for its operation. Then the children, working in pairs, are given a group of objects which they are to use first to duplicate the teacher's mystery box and then produce different kinds of "boxes." This period of experimentation is followed by a review of the concept of interaction and the invention of a systems concept. The lesson concludes with feedback and summary activities.

S 050 shows a complete lesson and could be used for many general kinds of analyses; in addition, it can be used;

a) to practice planning a lesson based on materials provided by a curriculum project;
b) to test one's plan against that devised and implemented by another teacher;
c) to consider the quality of interaction between third-grade students assigned to work in pairs;
d) to consider the teacher's role during experimentation and invention activities;
e) to discuss the extent to which an inquiry lesson can or should be structured; and
f) to examine the kind of learning which takes place in an inquiry-oriented lesson.

If this tape is used in conjunction with other SCIS tapes, viewers would also have an opportunity to compare ways in which different teachers implement SCIS lessons.

S 050 should prove useful in an undergraduate course in science and/or elementary methods, and in in-service programs. It might also be used in a general methods course.

VOLUME S 055 (58 minutes)

In this volume, a second grade class is shown studying Material Objects, the first unit of the physical science sequence prepared by SCIS. The activities shown were taped during three consecutive science lessons. In these lessons, the students use a variety of objects in activities which focus on describing and sorting objects according to their properties. In the third day's sequence materials are used which informally introduce the concept of material.

In the first lesson, the students are shown working on Chapter 3, "Grandma's Button Box," in which they describe and sort buttons according to their properties. This sequence shows the students working individually with their own materials and subsequently reporting to the class what they did. In the second lesson, the teacher teaches the "Objects Grab Bag Game" (Chapter 5). This sequence shows the teacher giving instructions and groups of children engaged in playing the game. In the third lesson, the students sort pieces of wood, plastic, and metal (Chapter 7, "Grouping Collections of Objects"). This sequence shows students working individually and then reporting how they sorted and guessing how other students sorted.

On all three days, the teacher spends a short time introducing different plants and having the students describe and compare them (Chapter 6, "Extending the Study of Objects").

S 055 can be used to discuss:
- a) how one teacher adapts the activities to her style and her class;
- b) how to use the learning of previous lessons;
- c) how different materials and activities are used to teach the same concepts;
- d) the teacher's role during diverse types of activities;
- e) student-student interaction among second graders engaged in several different activities; and
- f) how the viewers would have taught the lesson in comparison with the way in which one teacher did.

It is recommended that S 055 be used in conjunction with other SCIS tapes in order that viewers have the opportunity to compare ways in which different teachers teach SCIS activities. This tape should prove useful in elementary science methods courses, general methods courses and in-service training programs for elementary teachers.

VOLUME S 056 (50 minutes)

This tape shows a first grade class studying Material Objects, the first unit of the physical science sequence prepared by SCIS. The students are learning to sort and describe objects by their properties. The activities shown are Chapter 1, "Objects in the Classroom" and Chapter 2, "Grandma's Button Box." In the first, students describe familiar objects from the classroom by their properties, play several games which further focus their attention on properties, and develop a list of property words. In the second, the students sort buttons by several properties.

S 056 should prove useful in elementary science methods courses, general methods courses and in-service training programs for elementary teachers. It can be used to discuss:
- a) how one teacher adapts an activity to her style and class;
- b) how the activities inter-relate and build upon one another;
- c) the ability of some first graders to work independently;
- d) the ways in which a teacher can obtain and use feedback from the students;
- e) lesson plans prepared by the viewers with the lesson shown on the tape;
- f) pacing of a lesson;
- g) questioning techniques;
- h) ways of individualizing instruction; and
- i) how a science lesson may be used to further other skills such as language development and independent work.

VOLUMES S 057 - S 058

These volumes show one teacher and first grade class, over a seven-day period, studying Material Objects, as prepared by SCIS. The tapes may be used singly, but when combined they cover most of the activities in Part One of the unit, "Introducing Objects and Their Properties," where the students learn to use the word object and to describe objects by their properties.

> S 057 (58 minutes): In Part I (the first day), excerpts show the class reviewing the property words they have previously used. They then continue an activity designed to give them more experience in identifying the properties of common objects. Excerpts from the second day are shown in Part II; the class plays some different "games" in which the students have further practice describing objects by their properties. Part III shows the science lesson of the third day in its entirety; the students continue activities in which they describe and identify objects by their properties and then they review the property chart.
>
> S 058 (57 minutes): This volume contains excerpts from the next four days of class work on Material Objects. The students learn to sort various collections of objects according to different properties. Part I shows the students, as they work in pairs, examining and describing a collection of objects provided by the teacher. Part II shows the following day as they practice sorting this collection of objects. In Part III, the third day shown on this tape, students bring in objects from home; the teacher specifies a property and then collects those objects which have that property. Part IV shows excerpts from the final day of work on this unit; the students work with buttons and sort them by size, shape, color and other properties.

S 057 and S 058 show how one teacher used SCIS materials in an inner-city school. They should prove useful in elementary science methods courses, general methods courses and in-service training programs for elementary teachers. They can be used to show:

- *a) how one teacher adapts SCIS activities to her teaching style and her class; viewers may contrast this with their own teaching plans;*
- *b) how a variety of activities can be used to develop the same skill--in this case, the ability to describe the properties of objects;*
- *c) day-by-day changes in students' ability to describe the properties of objects (for evaluation);*
- *d) how a teacher modifies activities in order to avoid certain difficulties or provide greater challenge;*
- *e) how a teacher works with different numbers of students: the entire class, groups of students, and individual students;*
- *f) the ability of one group of first graders to work independently and in pairs; and*
- *g) the development of one complete lesson and/or a complete unit of work.*

VOLUME S 059 (51 minutes)

This volume shows three different classes (two first and one second grade) doing the same activity--"Grandma's Button Box" from the first SCIS physical science unit, Material Objects. In this activity students describe and compare the properties of buttons and then sort them according to their properties. The three parts of this tape have been extracted from S 055, S 056 and S 058 in order to show how three different teachers adapt the same activity to their style and class.

S 059 should prove useful in elementary science methods courses, general methods courses and in-service training programs for elementary teachers. It can be used to discuss adapting prepared material as well as for comparing the three lessons shown on such dimensions as:

- *a) student-student and teacher-student interaction;*
- *b) techniques for obtaining feedback;*
- *c) questioning technique;*
- *d) the ability of the students to do the activities; and*
- *e) the viewers' reaction to the classroom atmosphere.*

It also provides material for discussing the role of the teacher in an SCIS classroom and the organization of the room and equipment when teaching SCIS.

VOLUME S 070 (49 minutes)

The first grade students in this tape are studying Organisms, the first unit in the life science part of the SCIS program. They have recently begun a study of organisms in aquaria. Two days prior to this lesson, groups of students set up their own aquaria. In the preceding lesson, they observed the aquaria and began an experiment to determine which fish were male and which were female (this is contained in a nine-minute segment of S 071).

This tape shows one complete lesson. In the first part of the lesson, groups of students observe the aquaria. After regrouping as a whole class, the students report their observations and answer some questions the teacher poses. Students spend the last part of the lesson drawing pictures of their aquaria.

S 070 can be used with other SCIS tapes in order to contrast the styles of different teachers. It should prove useful in elementary science methods courses, general methods courses and in-service training programs for elementary teachers. It can be used to provoke discussion about:

- *a) how to plan and pace a lesson for first grade students;*
- *b) what are first graders' ideas of life, birth, death, and causation;*
- *c) how to promote discussions among students in the lower grades;*
- *d) how to organize the classroom for science lessons;*
- *e) how to adapt ideas from a curriculum program to suit one's class;*

f) what constitutes good questioning technique;
g) how a teacher may evaluate students: and
h) how to promote student-student interaction.

VOLUME S 071 (56 minutes)

The first grade class shown on this volume is the same as that shown on S 070. The tape shows segments from five consecutive lessons in which the students are beginning a study of aquaria. On the first day the class reviews an introductory discussion of how to observe aquarium organisms. Pairs of students then examine beakers containing duckweed, guppies, and snails, after which there is a class discussion in which students answer some questions the teacher has prepared.

On the following day the class discusses aquaria. Groups of students then build their own aquaria. This is reviewed at the beginning of the third lesson. The teacher also introduces the idea of male and female and asks that the students try to find any differences between male and female fish. A period of observation is followed by a discussion during which students report their observations. During this discussion the teacher proposes separating fish of different colors in order to find out which are male and which are female.

On the fourth day the students carry out four different types of activities: a review of the third day's work, observation of aquaria, discussion of their observation, and the drawing of their aquaria (this duplicates a segment of the lesson shown on S 070). In the last lesson shown, the students observe baby guppies in one of the experimental aquaria. During the subsequent discussion they compare the babies to adult guppies and discuss which adults are males and which are females. At the end of the lesson, the students return briefly to the aquaria to look for snail eggs.

S 071 can be used in conjunction with Volume S 070, which shows the complete lesson on the fourth day, in order that viewers see an example of a complete lesson as well as the development of a sequence of lessons. This tape should be useful in elementary science methods courses, general methods courses and in-service training programs for elementary teachers. It can be used to discuss:
a) how an activity is developed over several lessons;
b) some first graders' ability to work with aquarium organisms;
c) different techniques for evaluating students' understandings;
d) one way of organizing a classroom for studying living organisms;
e) different types of classroom activities, ie., discussions, observations, reviews, and recording observations and the role of the teacher during each of these;

f) opportunities a teacher can use to evaluate students, as well as different techniques of evaluation;

g) how this teacher's lessons compares with those plans viewers have prepared, as well as with the activities described in the manual; and

h) questioning techniques.

VOLUME S 079 (49 minutes)

This volume shows excerpts from one day's activities by a 2nd grade class in one school and a 3rd grade class in another school. Both classes are studying fruit flies and are using as a text Life Cycles, the second life science unit prepared by SCIS.

Students in the second grade class (shown in Part I) have set up new cultures and, for the past few days, have observed their vials carefully, noting the changes which are taking place. The teacher also has encouraged them to bring food to class in order to see which food attracts fruit flies.

Part II shows the 3rd grade class as they observe, record, and report the changes taking place in their fruit fly cultures.

S 079 should prove useful in elementary science methods courses, general methods courses and in-service training programs for elementary teachers. It can be used to compare:

a) the lessons, based on the same material, which two teachers teach;

b) the teaching styles of two teachers;

c) how two groups of students work with living organisms; and

d) class atmosphere, pacing of the lesson, questioning techniques, etc.

VOLUMES S 080 - S 081

These volumes show a third grade class studying Life Cycles, the second unit in the life science sequence prepared by SCIS. In this unit students first study the life cycles of plants before going on to study animals.

In these tapes, the students are beginning to study animals, the first of which is the fruit fly, and then they study mealworms. The tapes may be used singly or in series.

S 080 (46 minutes): This tape shows one of several initial lessons in which the students observe the vials. The tape shows most of the development of the lesson as the students engage in various activities which focus their attention on the changes taking place in the fruit fly cultures.

S 081 (41 minutes): Part I of this tape shows excerpts of the last part of the class period. The students are introduced to mealworms and set up their own cultures. Part II shows excerpts from the next day of class; the students continue their observations, report what they have observed, and draw mealworms. Part III shows excerpts from the third day when the students observe molts and the teacher explains the process; they then prepare a list of student observations on mealworms.

S 080 and S 081 should prove useful in elementary science methods courses, general methods courses and in-service training programs for elementary teachers. In addition, they may be used to discuss:

a) *teacher-student and student-student interactions;*
b) *different types of teacher questions and the types of responses they elicit;*
c) *several ways to stimulate student observations and discussions;*
d) *the ability of some third grade students to observe and work with living organisms;*
e) *SCIS teaching strategies as described in "Clues for the Teacher," included in each of the manuals;*
f) *the development of a lesson and illustration of how one teacher adapts this activity to her style and class (viewers may compare this with their own lesson plan);*
g) *an example of a lesson at the exploration stage; and*
h) *how an activity can be developed over several days and provide a basis for discussing when to follow one's prepared lesson plan and when to change the plan to follow student interests.*

EARTH SCIENCE CURRICULUM PROJECT (ESCP)

OVERVIEW

The teachers shown in the four tapes offered in this area are using materials prepared by the Earth Science Curriculum Project. Although the content can be used to familiarize viewers with ESCP materials, it may be more useful in discussing the way in which a junior high school has developed an individualized, investigative 8th grade science program designed to take full advantage of the flexible, modular scheduling system used by the school itself.

The following tapes are available:

Volume	Subject	Teacher(s)
S 210	Interview, principal and science teachers.	Mr. Lori Palmer, Principal Mrs. Marie Cross Mr. Richard Neitzke
	Astronomy class, guided group activity.	Mrs. Marie Cross
S 211	Astronomy class; group work and individualized instruction.	Mrs. Marie Cross
S 212	Historical geology; class works together on an investigation.	Mr. Richard Neitzke
S 213	Historical geology; review of a chapter via questions prepared by students.	Mr. Richard Neitzke

All of the taped material was recorded in Minnetonka East Junior High School, Minnetonka, Minnesota, a suburb of Minneapolis, in cooperation with School District #276 and the Earth Science Curriculum Project. The time was the spring of 1968. The ESCP text, Investigating the Earth, used by the teachers is available through the Houghton Mifflin Company.

Each tape is accompanied by a set of written supplementary materials including the following:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of each tape, including illustrative questions for discussion.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES S 210 - S 213

In the two classes shown in these tapes, the basic materials studied by the students are those developed by the Earth Science Curriculum Project. One class is studying Chapters 19 and 20, the other, Chapters 24, 25 and 26. Sequences included in the tapes were selected from twelve class periods, six for each group.

> S 210 (59 minutes): This volume contains three parts. The first shows an interview with the principal of the school and the two teachers whose classes were taped. They discuss the programming pattern of the school as a whole, give background information about the science classes which were taped, explain their philosophy of teaching science, and give impressions as to the success of their present 8th grade science program. Part II consists of an excerpt from the first tape made of the group studying astronomy. The teacher described the activity shown as a "group guided activity," in the interview. Part III shows excerpts of students' work in groups the following day.
>
> S 211 (52 minutes): This tape contains excerpts from three days' classes; they feature the same class and teacher as shown in S 210. Primary emphasis is given to examples of group work, especially the way in which an able student adjusts to the system; it also provides an opportunity to consider the role of the teacher in an individualized approach, and gives one example of an all-class activity intended to assure the learning of important ideas in Chapter 24.
>
> S 212 (48 minutes): This volume features the group which is studying historical geology. The class period shown on the tape is one in which the teacher elects to have students do the first investigation in Chapter 20 without using their texts. Part I shows the teacher's introduction of the problem, Part II shows the students working in groups, and Part III shows the class summary and discussion of results.
>
> S 213 (45 minutes): The last tape in the series features the same class and teacher as shown in S 212. This class period was devoted to a class discussion of questions raised by students pertaining to the content of Chapter 19.

S 210-213 could be used to promote a variety of general methods discussions as well as issues pertaining to science teaching, for example:

a) to discuss patterns of modular scheduling;
b) to consider a modular plan which gives a team of teachers freedom to review and revise weekly programs for their students;

c) to gain insight into possible advantages and disadvantages in developing a science program within a flexible, modular system;
d) to observe individual and group study activity and the interaction among students in this kind of setting;
e) to discuss the role of the teacher when students are involved in individualized study activities;
f) to view activities used by these teachers as a change of pace from and supplement to the dominant individualized study pattern in use;
g) to hear the teachers' evaluation of the results of their approach as recorded in an interview situation;
h) to consider the philosophy of teaching science implicit in this approach; and
i) to discuss the extent to which the activity shown reflects the philosophy of the ESCP.

S 210-213 could be used to promote discussion in in-service settings as well as in pre-service classes. They may be used individually although one gains a more complete picture of the program by viewing the entire series.

INTRODUCTORY PHYSICAL SCIENCE GROUP (IPS)

OVERVIEW

A total of six tapes featuring ninth grade classes using materials prepared by the Introductory Physical Science Group is available:

Volume(s)	Subject	Teacher	Location and (Type of School)
S 200-201	Pre-lab, lab and post-lab of Experiments 6.4 and 6.6.	Mr. Frederick R. Riehm	West St. Paul, Minn. (suburban)
S 202	Discussion of test, Demonstration 11.1, and work on HDL's.	Mr. Larry Falling	Hutchinson, Minn. (urban)
S 203-205	Introducing students to laboratory procedures & equipment.	Mr. Lesley J. Carlson	Bloomington, Minn. (suburban)

The tapes were made in cooperation with the staff of IPS and the content for Volumes S 200-201-202 were selected by them. The material for these tapes was recorded in 1970. The class shown in S 203-205 is considered to be above average in ability; the rest are heterogeneous in composition.

Each tape is accompanied by the following supplementary materials:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

The materials used by the teachers are available from Prentice-Hall, Inc. (IPS group of Educational Services Incorporated: Introductory Physical Science, 1967.)

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES S 200 - S 201

These tapes feature a ninth grade science class which is using materials prepared by IPS. Each of the tapes shows the development of an IPS experiment through the pre-lab, lab and post-lab phases.

> S 200 (42 minutes): This tape contains excerpts from content recorded over a three-day period during which time students work on the synthesis of zinc chloride, Experiment 6.4. The first day students begin the experiment by weighing the zinc metal, placing it in test tubes and making tests on the gas while the reaction proceeds. After the reaction slows down, the students place the tubes in storage for analysis the next day. The second day students determine the amount of zinc chloride formed in the reaction and complete the experiment. The third day students calculate the ratio of zinc to zinc chloride, using the data collected during the two previous days. At the end of the period, the teacher conducts post-lab activities.
>
> S 201 (50 minutes): This tape contains excerpts from two class periods during which students work on Experiment 6.6, a reaction with copper. The first day they discuss the purpose of the experiment and do the laboratory work. The second day the class has its post-lab discussion of the experiment and a brief discussion of HDL's #12 and #14.

S 200 and S 201 could be used to provoke a discussion of the design and implementation of IPS curricular materials in pre-service or in-service settings. Viewers should be asked to familiarize themselves with the IPS materials on which the lessons are based and possibly to devise their own lesson plans before observing the way in which one teacher approached the experiments. This would enable them to compare their strategies with those employed by the teacher.

VOLUME S 202 (40 minutes)

This tape contains excerpts from two consecutive ninth grade class periods; the students are using IPS materials. Shown as part of the first class period are a discussion of questions on a test taken the previous day and two volunteers performing a demonstration of Experiment 11.1 for the class. The second day the teacher reviews results of the demonstration and arrives at an operational definition of the calorie. Toward the end of the period, the teacher asks individual students to work several of the assigned HDL's at the chalkboard.

S 202 may be used to provide a springboard to discussions of the philosophy, design and implementation of IPS materials.

VOLUMES S 203 - S 205

This series of three tapes shows a ninth grade science class which is beginning its study of experimental, introductory physical science. The teacher is using materials prepared by IPS as adapted to the science curriculum in this particular school. The content of the tapes was recorded over a five-day period during which time the students completed Chapter 1.

S 203 (43 minutes): Although this tape shows the class during its second meeting of the year, it is essentially their first day with experimental science. The teacher uses most of the period to familiarize students with the physical arrangement of the laboratory (e.g. where equipment is stored), procedures used to distribute and collect equipment, safety measures, and general rules governing their behavior in the lab.

S 204 (57 minutes): This tape include portions of the next three class periods. The first section shows the pre-lab and a segment of the dry run for Experiment #1; the second shows students doing the first part of Experiment #1 involving the heating of wood and collecting of gas and liquid products; the third shows them doing the second part of the experiment involving the distillation of the liquid and writing of their summaries.

S 205 (48 minutes): This tape shows the fifth and final day of work on Chapter 1. Students compare their observations and, in the process, get into a discussion of what scientists do when they don't agree and what a "scientific truth" really is. Then they move to a discussion of the summary questions. At the end of the period the teacher gives a quiz designed to test the accuracy of their observations relating to Experiment #1.

S 203-205 were made for the purpose of provoking discussion about ways to familiarize students with laboratory procedures such as those required by the IPS course. They can be used as a springboard to discuss:

a) the physical set-up of an IPS laboratory;
b) ways of teaching students to properly use, protect, and store laboratory equipment;
c) efficient ways of distributing and collecting equipment in a class of thirty-six students;
d) safety precautions in laboratory work of this type;
e) the establishment of a classroom atmosphere in which these kinds of experiments can be carried on safely and productively;
f) ways of teaching students to keep science notebooks;
g) ways to introduce students to the philosophy of experimental science; and
h) the extent to which the teacher's approach is representative of the IPS philosophy of teaching science.

S 203-205 would probably prove most useful in a pre-service, science methods class. To get full value from viewing them, students should be asked to write lesson plans covering Chapter 1 in advance, so they can compare the teacher's strategies with their own. The tapes may be used singly but probably would be most effective if used as a series.

UNIVERSITY OF ILLINOIS COMMITTEE ON SCHOOL MATHEMATICS (UICSM)

OVERVIEW

During the summers of 1968 and 1969, Project personnel video-taped two institutes for high school teachers directed by Dr. Max Beberman of the University of Illinois Curriculum Laboratory. The intent of the institutes was to acquaint teachers of underachievers in mathematics with two courses developed by the Illinois Committee on School Mathematics, one in algebra entitled "Stretchers and Shrinkers" and one in geometry entitled "Motion Geometry." The sessions were recorded to provide similar experiences for teachers who were not present at the institute but who could view the material on video tape. The content editing was done by the UICSM staff.

The instructor shown in Volumes M 300 - M 331 is Dr. Beberman. In the first volume he provides some historical background pertaining to the development of both courses and sketches the pedagogical concerns which motivated the authors in developing the courses. In subsequent volumes, Dr. Beberman goes through the "Stretchers and Shrinkers" course (Books I-IV, published by Harper and Row) to explain the rationale for the content and organization of the course and give teaching suggestions. In Volumes M 340 - M 342, Joseph Hoffmann of the UICSM staff talks about the Activities contained in the Handbook which accompanies the text.

Volumes M 400 - M 434 relate to the "Motion Geometry" course (also published by Harper and Row). The instructor for these sessions is Russell E. Zwoyer, also a member of the UICSM staff and one of the developers of the geometry materials.

Any of the tapes in this section may be used singly, by Books, or as complete series. They offer the viewer the opportunity to follow staff interpretations, on a page-by-page basis, of the materials contained in both courses. Many questions are raised and discussed as the institute participants work through the pages of each book.

During the fall following the 1968 institute, Project personnel taped the classes of three of the teachers who had been in the Institute. Some of these are listed as Volumes FE 810-818, 820-825, 826-833, and 834-835, in the foundations of education section because it was believed they had considerable value for acquainting pre-service teachers with problems of teaching in inner-city schools and somewhat limited value in discussing the teaching of mathematics. Nevertheless, they are recommended for the viewer who wishes to observe the reactions of inner-city underachievers to the materials.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES M 300 - M 331

These volumes show the lectures, by Dr. Max Beberman, on the "Stretchers and Shrinkers" course developed by UICSM.

Book I: The Theory of Stretching Machines (M 300 - M 308)

M 300 (46 minutes): This gives historical background and motivation for the development of both courses. Professor Beberman then involves participants in a careful examination of Chapter 1, "Stretching Machines," pages 1-13.

M 301 (53 minutes): This tape shows an examination of the remainder of Chapter 1, pages 12-30. Pedagogical concerns for introducing new mathematical notations, summarizing information, and testing and grading practices receive special attention. A page-by-page discussion of Chapter 2, "Hookups and Factoring," pages 31-40, gives special attention to ways in which new notation is introduced and utilized by the students.

M 302 (55 minutes): Professor Beberman delineates the various mathematical concepts considered in the first 40 pages of Book I and then discusses Chapter 2, pages 41-43.

M 303 (34 minutes): In reviewing Chapter 2, pages 44-54 and Chapter 3, "Factoring, Factors, and Equations," pages 55-63, participants discuss in some detail the relationship between replacing hookups with single machines and multiplications of whole numbers, factoring and factors, and equations and factoring diagrams.

M 304 (41 minutes): Professor Beberman and the Institute participants examine a variety of pedagagical procedures and techniques related to the teaching of underachievers, which are integrated into the "Stretchers and Shrinkers" program.

M 305 (60 minutes): A detailed discussion of Chapter 3, pages 64-82, deals with equation solving, the results of extending the domain of stretchers to include magnitudes other than length, and the Committee's strategies for teaching "story problems." There follows an examination of Chapter 4, "Punch Cards, Factoring, and Primes," pages 83-107, with a detailed discussion of factors, factoring, factorizations, the rearrangement principle, and even and odd numbers.

M 306 (47 minutes): Professor Beberman elicits a pedagogical evaluation of the course. The participants then examine the text's development of primes, Chapter 4, pages 109-119, and discuss grades and grade placement problems.

M 307 (56 minutes): Professor Beberman describes in some detail function application, function composition and multiplication of whole numbers and how they relate to the Committee on School Mathematics' view of multiplication in "Stretchers and Shrinkers." Activities then focus on Chapter 4, pages 120-125, dealing with primes, prime factorization and an introduction on the roles and contents of Stretchers and Shrinkers, Book I, supplementary pages, 145-160.

M 308 (48 minutes): This tape presents an extended discussion of Chapter 5, "Repeater Machines and Exponents," pages 127-144. Of particular interest to the group was the possibility of using a zero exponent and perhaps even a zero base and zero exponent. Professor Beberman then engages the participants in a summary of the mathematical and pedagogical contents of Book I.

Book II: Advanced Topics in Stretching and Shrinking (M 309 - M 312)

M 309 (52 minutes): Participants have a discussion of the motivational significance of Chapter 1, "Approximations," pages 1-38, and a careful examination of the content and pedagogical devices developed in Chapter 1 and in Chapter 2, "Shrinking Machines," pages 39-42.

M 310 (57 minutes): The discussion and examination of the contents and varied pedagogical devices built into Chapter 2 is continued, pages 43-52. There then is a comparison of stretchers and shrinkers, an introduction to the use of unit fraction language and a discussion of inverses, pages 53-80. Professor Beberman gives a quick summary of the concepts and skills considered in Chapter 1 and then discusses Chapter 3, "Hookups of Shrinking Machines," pages 81-106. He highlights the many similarities between hookups of stretchers and hookups of shrinkers.

M 311 (53 minutes): Dr. Beberman and the participants exchange a variety of ideas and reactions to Chapter 4, "Mixed Hookups," pages 107-138. The principal one is that mixed hookups are the forerunners of fractions and that students will have had many opportunities to deal with fraction concepts long before label is given to them. Dr. Beberman then discusses Chapter 5, "Simplifying Long Mixed Hookups," pages 139-151, and gives a detailed explanation of how the students have been prepared to deal effectively with fraction concepts prior to their "official" introduction (in Book III).

M 312 (58 minutes): The discussion of Chapter 5 continues, pages 152-160. Dr. Beberman then completes his outlining of the mathematical content of Book II.

Book III: The Theory of Fractions (M 313 - M 319)

M 313 (54 minutes): After a detailed description of Chapter 1, "Percent," pages 1-21, Professor Beberman begins a discussion of Chapter 2, "Fraction Machines," pages 22-39.

M 314 (59 minutes): Professor Beberman continues his discussion of Chapter 2, pages 40-60, and then he and the participants examine pages 61-74 on the development of "Multiplying by a Fraction," the subject of Chapter 3.

M 315 (55 minutes): Professor Beberman continues the discussion of Chapter 3, pages 75-86, and then moves on to Chapter 4, "Dividing by a Fraction," pages 87-107.

M 316 (58 minutes): A problem solving session is conducted to summarize the work done on multiplying and dividing by a fraction. Dr. Beberman then begins a discussion of Chapter 5, "Adding and Subtracting Fractions," pages 108-117.

M 317 (37 minutes): The discussion on addition and subtraction of fractions is continued and Chapter 5 is completed, pages 118-136.

M 318 (44 minutes): Professor Beberman discusses a variety of conceptual and pedagogical problems associated with the teaching of Chapter 6, "Mixed Numbers," pages 137-154.

M 319 (53 minutes): A discussion of Chapter 7, "Percent Revisited," pages 155-158, shows that the first machine in a percent hookup may now be a mixed number as well as a stretcher, shrinker or fraction. Dr. Beberman then uses the summary pages, 159 and 160, to conduct a detailed review of the major concepts of Book III.

Book IV: Decimals (M 320 - M 331)

M 320 (49 minutes): Professor Beberman gives a detailed discussion of the first part of Chapter 1, "Place Value and Decimals," pages 1-7. He pays particular attention to the pedagogical reasons for contrasting a non-fixed base-place value system with the decimal system for numeration.

M 321 (45 minutes): Participants complete the discussion of Chapter 1, pages 1-16, and then discuss the subject matter of Chapter 2, "Adding and Subtracting Decimals," including a brief review of adding decimals, pages 17-26.

M 322 (57 minutes): In a detailed discussion of Chapter 3, "Converting Decimals to Fractions," pages 27-36, Dr. Beberman's use of the decimal place value table as a pedagogical tool for reading, comparing, and decimal conversion problems is highly illuminating.

M 323 (38 minutes): Chapter 4, "Multiplication with Decimals," pages 37-48, is discussed. Dr. Beberman shares with the institute participants many pedagogical insights into what's behind the conventional rules for correctly placing the decimal point in the product.

M 324 (50 minutes): Professor Beberman discusses pages 49-61 in Chapter 5, "Converting Fractions to Decimals." He gives particular attention to situations which require the use of rounding techniques before beginning his summary of Chapter 5, pages 62-64.

M 325 (44 minutes): The last two pages of Chapter 5 are discussed and then Dr. Beberman gives a detailed analysis of the algorithm for "Dividing by a Decimal," the content of Chapter 6. He then begins a summary of Book IV, pages 1-72.

M 326 (50 minutes): Professor Beberman completes his summary of Book IV, Chapters 1 to 6, and then conducts a lively discussion of dividing by a decimal.

M 327 (58 minutes): Chapter 7, "Decimals and Percents," pages 78-84, are discussed and then Professor Beberman gives a detailed introduction to Chapter 8, "Conversion Factors," pages 85-89.

M 328 (59 minutes): Professor Beberman completes the discussion on Chapter 8, pages 90-93, and begins a discussion of Chapter 9, "Rates and Problems," pages 94-98.

M 329 (46 minutes): The discussion of Chapter 9 continues, pages 99-105.

M 330 (60 minutes): Professor Beberman concludes the discussion of rates and problems as presented in Chapter 9, pages 106-113.

M 331 (57 minutes): Professor Beberman discusses Chapter 10, "Scales" and Chapter 11, "Graphs of Rates and Conversion Factors," pages 119-128. With these last two chapters of Book IV, Professor Beberman concludes his discussion of the "Stretchers and Shrinkers" program.

VOLUMES M 340 - M 342

These volumes cover the explanations and discussion of some of the activities contained in the Activities Handbook developed for use with the text Stretchers and Shrinkers, prepared by UICSM. As the activities are meant to supplement the regular workbook, the volume numbers for the Max Beberman lectures, covering the pages with which the activities are recommended for use, have been entered in the descriptions given below.

M 340 (50 minutes): In Part I of this tape, Professor Hoffmann conducts Activity 2, 3, and 5; in Part II, Activity 6 and 8, and Activity 9 and 10 in Part III. (M 300 and M 301 cover lectures on the pages to which these are assigned.)

M 341 (38 minutes): In Part I, Mr. Hoffmann reviews Activity 15 and 16; in Part II he conducts Activity 50 and 54; and, in Part III, Activity 56 and 64. (M 301 and M 302 cover lectures on pages these activities supplement.)

M 342 (52 minutes): In Part I of this tape, Professor Hoffman conducts Activity 61, 63, 68 and 69; in Part II, Activity 95. (M 306, M 308 and M 309 cover lectures on the pages to which these activities are assigned.)

These tapes augment the Beberman lectures and give the viewer an opportunity to see how the authors intended that the activities be used as supplementary exercises.

VOLUMES M 400 - M 434

These volumes cover the lectures on "Motion Geometry." Professor Russell E. Zwoyer was one of the authors of the text, Motion Geometry, and served as the instructor for this portion of the institute.

Book I: Slides, Flips, and Turns (M 400 - M 410)

M 400 (55 minutes): In Part I, Professor Zwoyer introduces Book I with a discussion of Chapter 1, "Congruent Figures," pages 1-7. In Part II, he continues the discussion, covering pages 8-12.

M 401 (51 minutes): Part I covers the discussion of pages 13-16 and, in Part II, Mr. Zwoyer and the participants work on pages 17-22 with the discussion centering on page 17. Mr. Zwoyer discusses a number of pedagogical problems connected with the exercises.

M 402 (60 minutes): Professor Zwoyer begins in Part I by discussing the congruent figures on pages 18 and 19. In Part II, Mr. Zwoyer completes the discussion of Chapter 1.

M 403 (59 minutes): In Part I, Professor Zwoyer finishes giving directions and after participants have taken the test referred to in the previous tape, he begins a review of Chapter 1. In Part II, Mr. Zwoyer completes the review and discusses some of the problems and the use of optional exercises.

M 404 (53 minutes): After answering participants questions on Chapter 1, Professor Zwoyer introduces Chapter 2, "Slides, Flips, and Turns." He gives a detailed demonstration of the slide motion.

M 405 (44 minutes): Following a review of the slide motion, Professor Zwoyer continues discussing Chapter 2, pages 32-70.

M 406 (41 minutes): Professor Zwoyer continues the discussion of the exercises in Chapter 2. He also gives participants an over-all view of the entire course in Motion Geometry.

M 407 (36 minutes): Professor Zwoyer completes the discussion of Chapter 2.

M 408 (44 minutes): Professor Zwoyer discusses Book 1, Chapter 2, pages 71-85; a review of Chapter 2.

M 409 (42 minutes): Professor Zwoyer discusses Book 1, Chapter 3, pages 86-91.

M 410 (42 minutes): Professor Zwoyer discusses the pedagogical and mathematical content of Book 1, pages 94-110. In discussing successive slides and successive turns, Mr. Zwoyer completes the discussion of Chapter 3 and Book I.

Book II: Congruence (M 411 - M 423)

M 411 (57 minutes): Professor Zwoyer conducts a detailed examination of *Motion Geometry, Book II*, Chapter 1, pages 1-12, dealing with three types of congruences.

M 412 (38 minutes): In this tape, Chapter 1, pages 13-21 are discussed. Professor Zwoyer and the participants are working on three congruence mappings.

M 413 (51 minutes): Professor Zwoyer discusses Chapter 1, pages 22-37, covering multiple motions, other congruent mappings, plus line and ray congruences.

M 414 (50 minutes): Professor Zwoyer discusses Chapter 1, pages 38-51 -- notational conventions for lines, rays, and segments, and what happens to such entities under slides, flips and turns.

M 415 (55 minutes): Professor Zwoyer discusses pages 52-59 -- a review of Chapter 1: "Congruences."

M 416 (52 minutes): In Part I, Professor Zwoyer completes the review of Chapter 1. In Part II, he begins the discussion of Chapter 2, "Angles and Angle Measures," pages 67-76. Mr. Zwoyer establishes conventions for naming angles and drawing angles named.

M 417 (51 minutes): In Part I, Professor Zwoyer works through the exercises on pages 77 and 78 of Chapter 2. In Part II, he discusses short names for angles and assigning measures to angles using nonstandard units, pages 79-88.

M 418 (53 minutes): In Part I, Professor Zwoyer covers Chapter 2, pages 89-98, continuing the discussion on angles and introducing protractors. In Part II, he gives a detailed discussion of pages 99-101 concerning the distinctions made among the concept of an angle, how UICSM "pictures" angles and what is not accepted as pictures of angles.

M 419 (51 minutes): In Part I, Professor Zwoyer continues the detailed discussion concerning the distinctions made among the concept of an angle, how UICSM "pictures" angles and what is not accepted as pictures of angles as covered in Book II, Chapter 2, pages 102-107. In Part II, Mr. Zwoyer summarizes his discussion covering distinctions among the descriptions of angles, pictures of angles, and non-pictures.

M 420 (42 minutes): In Part I, Professor Zwoyer discusses Chapter 2, pages 107-115, vertical angles and angle measures with various types of protractors. In Part II, Mr. Zwoyer begins the review exercises for Chapter 2.

M 421 (50 minutes): In Part I, Professor Zwoyer concludes the review of Chapter 2. In Part II, he begins the discussion of Chapter 3, "Symmetry," pages 122-131.

M 422 (48 minutes): Professor Zwoyer discusses Chapter 3, pages 132-150, dealing with making symmetric pattern and invariant figures under slides, flips, and turns.

M 423 (38 minutes): Professor Zwoyer completes the discussion of Book II, pages 151-160. He covers more on symmetry patterns and gives a cumulative review of Book II.

Book III: Symmetry (M 424 - M 430)

M 424 (46 minutes): Professor Zwoyer begins a discussion of Chapter 1, pages 1-15. In addition to discussing parallels and perpendiculars, he also takes time out to tell the participants about the UICSM's position on straight and reflex angles.

M 425 (52 minutes): In Part I, Professor Zwoyer discusses Chapter 1, pages 7-15, giving an explanation of parallel lines. In Part II, Mr. Zwoyer gives a brief review of the first few pages of Book III.

M 426 (47 minutes): In Part I, Professor Zwoyer discusses parallel lines and alternate angles and applications, Chapter 1, pages 15-31. in Part II, Mr. Zwoyer discusses pages 56-64, dealing with lines of symmetry and the magic mirror.

M 427 (54 minutes): Professor Zwoyer continues in Part I the discussion of Chapter 2; he covers pages 65-69 on symmetry of regiments and the angle bisector. In Part II, Mr. Zwoyer covers pages 69-80, dealing with the angle bisector, lines of symmetries for triangles, line symmetric triangles and isoceles triangles.

M 428 (56 minutes): In Part I, Professor Zwoyer continues the discussion of Chapter 2, pages 81-95: isoceles triangles. congruent angles of a line-symmetric triangle, congruent angles for isosceles triangles, equilateral and equiangular triangles, and right triangles. In Part II, Mr. Zwoyer discusses pages 96-107, the review, test and "extra for experts" section of Chapter 2.

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M 429 (48 minutes): Professor Zwoyer discusses Chapter 3, "Quadrilaterals."

M 430 (44 minutes): In Part I, Professor Zwoyer reviews the last few pages of Chapter 3. He also discusses the worksheets which deal with addition and subtraction of directed numbers. In Part II, Mr. Zwoyer discusses the Activity Handbook worksheets which deal with the multiplication of directed numbers. This completes his presentation of Book III.

Book IV: Constructions, Area, and Similarity (M 431 - M 434)

M 431 (56 minutes): Professor Zwoyer gives an overview of Book IV, Chapter 1, discussing the development of area formulas for rectangles, parallelograms, squares, triangles, and trapezoids. He then discusses in detail pages 1-8.

M 432 (56 minutes): In Part I, Professor Zwoyer completes the discussion of Chapter 1. In Part II, Mr. Zwoyer introduces and discusses Chapter 2, "Similarity," pages 56-88.

M 433 (45 minutes): In Part I, Professor Zwoyer continues the discussion of Chapter 2, pages 90 to 106. In Part II, Mr. Zwoyer discusses various straight edge and compass constructions in terms of motions, prior to discussing the text, pages 75-116.

M 434 (56 minutes): In Part I, Professor Zwoyer completes the discussion on Book IV, Chapter 2, pages 117-125. He also discusses briefly the review exercises in Chapter 3, pages 141, 156 and 160. In Part II, Mr. Zwoyer discusses multiplication and division of signed numbers and exercises in the Activities Handbook for Motion Geometry.

GENERAL MATHEMATICS

OVERVIEW

The eight tapes placed in this category were all made in what was formerly the University of Minnesota High School in the spring of 1966. The general ability level of students in the school was well above national averages.

Four of the tapes show junior high classes and four senior high:

Volume(s)	Subject	Grade	Teacher
M 200	Accelerated algebra class.	8	Mr. John W. Walther
M 201	Modular Arithmetic-CAI.	7	Mr. Larry L. Hatfield
M 203	Average algebra class.	8	Mr. John W. Walther
M 204	Algebra (Part I). Rational numbers of arithmetic (Part II).	9 7	Mr. Dale E. LaFrenz Mr. Larry L. Hatfield
M 501-502	Two classes beginning a unit on sequences and series (one using a time-sharing computer). SMSG materials.	11	Mr. Thomas E. Kieren
M 503	Students shown on M 502, working the second day on the unit on sequences and series (Advanced Algebra-CAI) SMSG materials.	11	Mr. Thomas E. Kieren
M 504	An abbreviated version of material shown on M 502 and M 503 (Advanced Algebra-CAI) SMSG materials.	11	Mr. Thomas E. Kieren

In addition, the editors prepared a topical tape illustrating the way in which three teachers introduced topics in mathematics. M 800 shows teachers Larry Hatfield (7th grade), Dale E. LaFrenz (9th grade) and Thomas E. Kieren (11th grade), from the University of Minnesota High School.

Classes appearing on the tapes are using a variety of materials; four of them (Volumes 501-504) are using SMSG texts. Dr. Larry Hatfield, formerly a teacher at the University High School and now on the faculty of the University of Georgia at Athens, was responsible for selecting the content of Volumes S 200, 501-502 and 503. Content for the remaining tapes was selected by Fred S. Blaisdell of the Minneapolis Public Schools with assistance from Dr. Randall Johnson of the University of Minnesota.

These tapes differ from all others listed in the catalog in that no supplementary materials have been prepared; thus, users must develop their own procedures for utilizing the material.

The audio and video quality of the tapes is rated acceptable for use although it does not match the technical quality of tapes recorded more recently.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUME M 200 (57 minutes)

This volume shows a modern algebra lesson carried on with a class of accelerated eighth grade students. These students were selected and accelerated in mathematics at the beginning of their seventh grade class at which time an "acceleration in depth" program was designed to carry a section of gifted students through most of the content of the regular seventh, eighth, and ninth grade curriculum in two years.

The structure of mathematics has been emphasized by developing number systems in a modern algebra setting. Key concepts, such as sets, conditions and solution sets, ordered pairs, number lines and cartesian sets, correspondences, factors and primes and finite systems have been used to develop, first intuitively and then formally, the group and ring concepts, the rational number system, the real numbers, and the system of polynomials in "x." The class is currently involved in extending the polynomial system to the system of rational expressions.

The taped lesson begins as the teacher uses a student's question to illustrate the addition of two rational expressions. The students are encouraged to check the rational expressions under addition and multiplication for the properties of a ring. Students use the inverse element concept to intuit the meaning of a subtraction operation in this structure.

Since M 200 is relatively unedited, it could be used for a variety of analytical purposes as well as to demonstrate kinds of mathematical activities which can be conducted with talented junior high students.

VOLUME M 201 (60 minutes)

This tape shows two class periods. A seventh grade urban laboratory school class is using a time-sharing computer terminal (which uses BASIC computer language) in the classroom to study modular arithmetic. The class has been writing programs for closure and associativity in clock 5. The previous day they had discussed a new binary operation, "square plus," which was defined as $a \oplus b \ominus 1$ where $\oplus$ and $\ominus$ are notations for modular addition and subtraction respectively.

Part I shows the teacher and students as they discuss what topics related to the new operation they should investigate. These include an operation table, properties of associativity, closure, identity element, inverses and commutativity. The teacher works an example, $3 \boxplus 4$ to illustrate what the "computer must do" to get the answer. The students and teacher develop the key computer statements. Students are then asked to write the complete program by themselves. As students begin their work, the teacher shows one student how to run the teletype terminal. This student is to take over running programs for classmates while the teacher helps others with their programs. A successful student program is run which tests "square plus" for associativity. *In an interview, the teacher explains the philosophy behind his use of the computer as illustrated in this class period.*

Part II shows the class as they are studying the binary "Even-Odd" system, whose elements are "E" and "O." The class first completes the following tables of addition and multiplication for the E-O system:

+	E	O
E	E	O
O	O	E

X	E	O
E	E	E
O	E	O

Students notice the similarity between the E-O system and the modulo 2 system:

+	0	I
0	0	I
I	I	0

X	0	I
0	0	0
I	0	I

The teacher sets up the two number classes:

class of 0 $\longleftrightarrow$ [0,2,4,...]

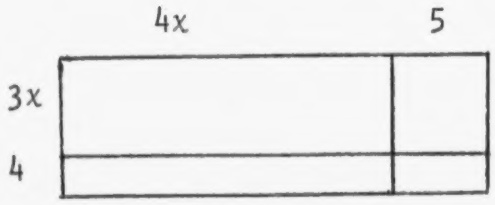
class of 1 $\longleftrightarrow$ [1,3,5,...]

The class then considers the set of subsets of [a,b,c]. Using the operations of set intersection and union, they discuss some properties of the system formed. At the conclusion of the combined class work, students work individually or in small groups. *There is an interesting and useful sequence in which the teacher gives individual help to a girl who is having difficulty in writing a program for addition mod 5, which they call circle plus.*

VOLUME S 203 (59 minutes)

This tape shows an average ability eighth grade class in an urban laboratory school. The class has been studying multiplication of two binomials using Chapter 8 of Exploring Modern Mathematics, a text by Mervin LaVerne Keedy, Richard E. Jameson and Patricia L. Johnson (New York: Holt, Rinehart and Winston, 1963).

The lesson consists of four related portions. In the first the teacher shows a geometric representation of multiplying two binomials: $(3x + 4)\ (4x + 5)$:



In the second and third portion, the teacher and students develop the special cases of the square of a binomial, $(x + y)^2$, and the product of the sum and difference of two monomials $(x + y)\ (x - y)$.

In the fourth portion, the teacher and class develop ideas of factoring especially factoring the difference of two squares ($(ax)^2 - (by)^2$). They work several examples and the students have time for individual work. The teacher circulates, giving individual help.

This tape could be used to discuss the rather "typical" lesson in mathematics. Of special interest is the way in which the teacher responds to incorrect or unexpected answers from students.

VOLUME M 204 (58 minutes)

This tape shows two different classes and teachers in an unban laboratory school; one algebra (9th grade) and one fractions (7th grade). Part I shows a ninth grade algebra class which uses as a text, Helen R. Pearson and Frank Benjamin Allen, Modern Algebra: A Logical Approach (Boston: Ginn Publishers, 1964). Previously the class had been introduced to changing linear equations in x and y into "slope-intercept" form. The teacher develops solutions of systems of two equations in two unknowns by graphic methods and later by analytical methods.

The class then reviews conjunctive and disjunctive compound linear sentences and their solution sets. They recall from a previous unit on logic that the solution set is formed by intersection or union of the truth sets of linear sentence clauses. The teacher then gives one more example followed by the homework assignment which they begin to work. The teacher and class then solve the system $\begin{cases} 3x + y = 0 \\ 2x - y = 0 \end{cases}$ graphically.

Part II shows a seventh grade class which is studying fractions (that is, rational numbers of arithmetic). They are using Exploring Modern Mathematics, a text by Mervin LaVerne Keedy, Richard E. Jameson and Patricia L. Johnson (New York: Holt, Rinehart and Winston, 1963). The class begins with a discussion of the different names for a rational number. The class has studied finite mathematical system and their properties, such as clock 5. They will now apply the ideas they previously developed to study the system of rational numbers of arithmetic. They begin by considering multiplication of two rational numbers.

VOLUMES M 501 - M 502

These tapes show two eleventh grade mathematics classes taught by the same teacher, beginning the study of sequences and series. They both use the same text book, SMSG, Intermediate Mathematics, (Yale University Press, 1961) as a primary reference; one class, however, has been taught to use a time-sharing computer.

> M 501 (58 minutes): The teacher uses an interesting historical reference to present several simple examples of sequences. The students are encouraged to use the search for patterns in deriving the "closed formulas" for their sequences.
>
> M 502 (49 minutes): This is the class which has been taught to use a time-sharing computer for the study of mathematics. They pursue the activities described in M 501 to the point where several students present computer programs to print out their first sequences.

M 501 and 502, used in combination, provide an opportunity to explore the uses of computers in teaching mathematics. Teacher comments are also included for discussion.

VOLUME M 503 (56 minutes)

This tape shows an eleventh grade mathematics class in its second day of study of a unit on sequences and series. It follows the class shown in M 502 and features students who have been using a time-sharing computer to study mathematics. The text being used by the class is *Intermediate Mathematics*, produced by The School Mathematics Study Group (Yale University Press, 1961).

The teacher reviews developments of the previous day's lesson and difficulties encountered by students in homework are discussed. The teacher then poses a problem to motivate the writing of a computer program, a problem which also permits the introduction of the series concept. During the last part of the period, students work independently or in small groups to write the assigned programs. Some students then communicate their completed programs to the computer.

Instructor's comments and reactions are included on M 503.

VOLUME M 504 (44 minutes)

This tape is an abbreviated version of M 502 and M 503. It features the eleventh grade class which is using a time-sharing computer to further its study of sequences and series. The text being used is: *Intermediate Mathematics*, produced by The School Mathematics Study Group (Yale University Press, 1961). The first segment shows the teacher's use of sequences of triangular, square, and pentagular numbers to introduce the topic. The second part shows portions of the class on the following day when the teacher poses a wage problem involving geometric and arithmetic progressions. This problem leads to the idea of series which the teacher intentionally introduces (along with the " " notation) after the concept has been well established.

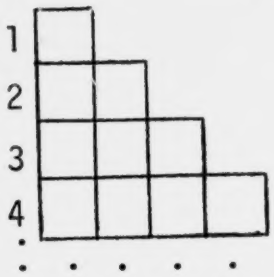
VOLUME M 800 (23 minutes)

This tape contains three illustrations of introducing topics in mathematics by three different teachers. The classes tend to be somewhat above average, both in background and ability.

In the first sequence, the teacher introduces the topic of reducing fractions to a seventh grade class, using a *Peanuts* comic strip on fractions. The teacher asks the students to look for the "how" and "why" of reducing fractions; students volunteer their ideas on how to reduce a fraction. The teacher explains that they will utilize the ideas of factoring which they have previously developed.

The next sequence shows a ninth grade algebra class which has been studying the solution of systems of two equations in two variables. The students have solved such systems, but they have not encountered a system with a null solution set. The teacher has passed out a quiz on systems of equations; number 2 on the quiz was: $\left[\begin{array}{l} y - 2x + 6 \\ 6x + 9 = 3y \end{array}\right.$ The class had been solving such systems during the previous class period but only where there was a solution. The quiz did not "count" and served to check progress and to introduce the special case of a system with a null solution set.

In the last portion of the tape, an eleventh grade class is beginning the topic of sums of sequences, i.e. series; the students have previously been studying sequences. The teacher introduces the topic of summation of a sequence using [1,2,...,n] as an example. The teacher asks the students to look for a pattern; one student guesses that the sum to the n^{th} term is 2n + 1, which is not correct. Without giving an answer for the sum, the teacher sketches descending "staircase" on the board:



He asks the students how to find the number of blocks in the sequence; they suggest some interesting solutions.

BIOLOGICAL SCIENCES CURRICULUM STUDY (BSCS)

OVERVIEW

Seven tapes are available which feature classes using materials prepared by the Biological Sciences Curriculum Study entitled, "Patterns and Processes," a course oriented toward laboratory work which involves a minimum amount of textual reading. All were made in cooperation with School District #280, Richfield Senior High School, Richfield, Minnesota, a suburb of Minneapolis. The teacher is Mr. Joseph B. Michel. Most of the students in the class shown are underachievers although the teacher believes that a few may be misplaced.

Volume(s)	Subject
S 530-535	Students study unit on "Cell Energy Processes."
S 800	Topical tape focusing on use of questions.

Volume S 800 duplicates material included in the S 530 series. It permits the user to consider the use of questions to elicit varying levels of cognitive thought as well as the structure and format of questions themselves.

Each tape is accompanied by the following supplementary materials:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

The class is using the text, Biological Science: Patterns and Processes, prepared by the Biological Sciences Curriculum Study and published by Holt, Rinehart and Winston, 1966 (revised 1970). Recordings were made during the months of December 1969 and January 1970.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES S 530 - S 535

This series of six tapes features a tenth grade biology class which is composed primarily of underachievers in science. Problems commonly associated with classes of this composition are present: reading difficulties, behavior problems, lack of interest and motivations, and limited ability to handle abstract, analytical thought processes. *Thus, observing this class not only provides opportunities to gain insight into the teaching of science in this setting, but also can provoke discussion* relating to the education of these youngsters in general. Therefore, these tapes are recommended for science methods courses and for courses in general methods and foundations of education as well. Although they could be used for in-service training purposes, their greatest usefulness lies at the pre-service level.

More specifically, S 530-535 could be used:

a) to initiate a discussion about the philosophy and approach of the BSCS materials being used by the teacher;
b) to study the use of the pre-lab, lab, post-lab model of science teaching with underachievers;
c) to evaluate underachievers' responses to a pattern of study which emphasizes laboratory work;
d) to compare responses of this class with a heterogeneous class or one of above-average ability and achievement;
e) to make inferences as to what is being learned by these students and consider whether these are things they ought to be learning;
f) to discuss educational goals exhibited by various students in the class;
g) to study student-student and teacher-student interaction in the class as a whole as well as during laboratory or small group activities, and to compare the quantity and quality of interaction with that found in other types of classes;
h) to study the role of the teacher and the way in which he modifies teaching plans to accommodate these students;
i) to recognize that a class such as this cannot be thought of as a group of like individuals, that its members vary in intelligence, motivation, ability to concentrate, interest and confidence; and
j) to examine the responses of these students when they are asked to analyze, synthesize or generalize.

S 530-535 could be used singly but use in series would greatly enhance their worth. They include excerpts selected from twelve different class periods; the sequences have been kept in chronological order to permit a study of progress and continuity. Only through viewing a substantial portion of the tapes does one obtain sufficient information to make judgments about the accomplishments of individuals in the class and to relate these to teaching procedures and the nature of the materials themselves. Because of the viewing time this involves, potential users are urged to consider using the tapes outside of class, perhaps as the basis for a paper requiring an analysis of some aspect of the activity.

S 530 (56 minutes): This tape consists of two parts. The first shows pre-lab activities related to the first experiment in the unit, "Cell Energy Processes;" the second shows the class during lab activities carried on the following day.

S 531 (56 minutes): Part I of this tape shows the interaction between students and students, and students and the teacher, during a supervised study period in which students are attempting to interpret their lab results. In Part II, the teacher directs a class discussion of the laboratory results from the first experiment. In Part III, the class discusses the work of Lavoisier and LaPlace as described in the text. The tape is especially useful in observing how these students interpret and analyze data.

S 532 (60 minutes): Part I of this tape shows the pre-lab of the second experiment in the unit, Part II a review of the work of Lavoisier and LaPlace, Part III a review of the pre-lab for the second experiment, and Part IV thirty-five minutes of the lab itself. The teacher deliberately spent less class time to pre-lab this experiment than he did with the one shown in Volume S 530.

S 533 (60 minutes): This tape shows the class as it repeats the second experiment because of unsatisfactory results obtained the first time. Of particular interest are the group interaction processes, the role of the teacher after having chastised students for doing so poorly the first time, and the individual differences apparent among members of the class. The last section of the tape shows the post-lab discussion of the experiment.

S 534 (58 minutes): This tape was made during the last class period before Christmas vacation; the teacher divides the class into small groups which are to prepare reports of their observations and conclusions regarding two demonstrations he has set up in the class. (These deal with respiration in germinating seeds.) Of primary interest is the pattern of group interaction and interaction between students and the teacher.

S 535 (52 minutes): Part I of the final volume in the series shows the class during its first class meeting after Christmas vacation. The review activities conducted by the teacher provide an opportunity to make some judgments about the learning which has taken place in the unit up to this point. Part II shows a pre-lab of the next experiment (involving the determination of the number of calories present in different foods) and the first part of the lab activity. The general tone of this lab is somewhat different from the other two shown; viewers can speculate as to the reasons for the differences.

VOLUME S 800 (37 minutes)

This volume features a biology class which is using special materials prepared by the Biological Sciences Curriculum Study Project, entitled: Biological Science: Patterns and Processes. The six sequences included have been selected to provide data for a discussion of the use of questions in the classroom.

The tape begins with question-answer activities and then moves into a question period related to a demonstration the teacher is performing. In Part III the teacher asks the class to interpret data obtained by one student with a view toward helping the rest of the class draw conclusions.

In Part IV of the tape, a student raises a question; this is followed by a sequence in which the teacher asks questions regarding the conversion of electrical energy to other forms. Part VI, the final sequence, shows the use of questions to explore the relationship between heat and movement.

S 800 can be used:

a) to discuss the classification of questions in terms of the kind of thinking they are designed to elicit;
b) to analyze unrehearsed classroom activity with a view toward identifying different levels of questioning;
c) to note student responses to different kinds of questions and to view them as possible indicators of the student's level of sophistication in handling different kinds of thought processes;
d) to consider the general format of questions as well as difficulty level; and
e) to consider miscellaneous questions such as whether it is productive to call on a student as a means of getting his attention.

If persons viewing the tape have had no previous exposure to different kinds of questions as related to levels of cognitive thought, the tape could be used to present information in this area. Sequences can then be used to illustrate different categories of questions.

CHEMICAL EDUCATION MATERIALS STUDY (CHEMS)

OVERVIEW

The five tapes offered for distribution in this category were made in cooperation with School District #623, Roseville Public Schools, Roseville, Minnesota, a suburb of St. Paul. The teacher is Mr. Theodore E. Molitor. Although they may be used singly, they have been edited as a series.

Each volume is accompanied by the following supplementary, written materials:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

The class is using the text, Chemistry, An Experimental Science (Revised Edition), prepared by Chemical Education Materials Study (W. H. Freeman and Company). The tapes were recorded in January, 1970.

Mr. Kenneth V. Jackman of the Lawrence Hall of Science, University of California, Berkeley, served as a consultant in the content editing of the tapes.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES S 510 - S 514

The class is studying a unit, shown in the CHEMS text, dealing with "Rates of Chemical Reactions" which requires eight class periods. The tapes show the introduction of the unit, activities used to develop the unit, and the discussion of the unit test in class. In reducing the content from eight class periods to five tapes, slightly less than half of the class activity has been deleted; however, viewing these segments was not judged to be vital to an understanding of the planning and implementation of the unit.

These tapes can be used singly, although their greatest usefulness may be realized in using them in series. They could be used as a springboard for a discussion of the design and implementation of the CHEMS curriculum, in either in-service or pre-service settings. (Persons using them for in-service programs may find it possible and desirable to make further deletions in the content provided.) Viewers should be asked to familiarize themselves with the unit as it appears in CHEMS publications and should be asked to devise a teaching plan before viewing the tapes. Used in this way, viewers have an opportunity to compare and contrast their teaching strategies with those employed by the teacher appearing on the tape. It must be remembered that no attempt has been made to produce tapes of model lessons; rather the content provided is to provide a concrete basis for discussing ways in which a given set of materials may be learned by students.

Perhaps the greatest value of this series of tapes lies in opportunities it provides to give prospective science teachers an opportunity to see one way of introducing, developing and culminating a unit; to evaluate the integrity of a unit plan in the sense of determining *whether procedures employed are logical in terms of objectives and to determine whether evaluation procedures are related to objectives; to analyze and discuss procedures relating to the pre-lab, lab and post-lab model of science teaching; to analyze responses of students to various methods employed by the teacher; and to gain experience in "teaching along" with the teacher as he must cope with realities of classroom teaching-learning activities.*

S 510 (51 minutes): The teacher distributes a schedule outlining the student's work for the unit; then he gives a test related to the previous unit. The class discusses the answers to the test questions and spends the last half of the period in pre-lab activities directed by the teacher.

S 511 (44 minutes): The first part of this tape shows excerpts of the laboratory period in which students do Experiment #29; the second part shows excerpts from Day 3 during which some students finish the lab, some are analyzing data and some appear to be working on questions at the end of the chapter. Near the end of the period, the teacher asks for their conclusions.

S 512 (51 minutes): This tape shows most of the fourth day's class activity. The class continues its discussion of the laboratory results; the teacher asks them to hand in their experimental write-ups. Near the end of the tape they view a film, entitled "Reaction Kinetics," produced by CHEMS.

S 513 (53 minutes): The first part of this tape shows segments of Day 5. The teacher asks students to review data relating to their experiment; they discuss algebraic equations which might describe the curve shown on a graph of results; and then they attempt to build a "collision model." The second part of the tape shows excerpts from Day 6. Students ask questions about the anticipated test; the class discusses energy curves.

S 514 (56 minutes): This tape shows excerpts of Day 7 which, by and large, was used for review activities, and Day 8 which shows a brief discussion of careers related to the study of science and then a discussion of the answers to the take-home unit test.

PROJECT PHYSICS COURSE (PPC)

(formerly Harvard Project Physics)

OVERVIEW

A total of three tapes is available. Each was made in cooperation with School District #271, Bloomington Public Schools, Bloomington, Minnesota, a suburb of Minneapolis, in February of 1970. The teacher is Mr. Robert Pintozzi.

The following supplementary materials are provided with each tape:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

The text being used by the class is the one prepared by PPC, The Project Physics Course, (New York: Holt, Rinehart and Winston, 1970).

Kenneth V. Jackman of the Lawrence Hall of Science, University of California, Berkeley, served as a consultant in the content editing of the tapes.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES S 525 - S 527

Students are studying Chapter 11,"The Kinetic Theory of Gases." The tapes show progression over a six-day period.

Although these tapes may be used individually, viewers will get a more complete picture of the way in which this particular teacher approaches this unit if they view at least two of the three. It might also be interesting to compare and contrast the teacher's approach in this class with the teaching style he uses in teaching PSSC materials as shown in Volumes S 520-524.

Viewers should be asked to familiarize themselves with the PPC materials and possibly to devise their own teaching strategies before observing those used by the teacher. This would provide opportunities for comparision. The tapes can also be used to provoke a discussion as to the extent to which the teacher's approach conforms to the philosophy of the designers of the materials and to evaluate student achievement in a relatively unstructured setting.

S 525-527 should prove helpful in a secondary science methods course or in an in-service teacher education program.

S 525 (56 minutes): The first day the teacher introduces the study of the kinetic theory of gases by asking students to consider what they already know about gases. (Students have not had a reading assignment at this point.) Students are assigned the task of reading the first four pages of the chapter over the weekend. The tape also shows parts of the second class period conducted the following Monday. The teacher begins with a three-question quiz related to the reading, calls the students' attention to the experimental topics at the end of the chapter, and then instructs students to learn more about gases.

S 526 (50 minutes): The third day the teacher again begins by giving a three-question quiz and then instructs students to continue work on their individual projects. He moves about giving individual help. He also returns a test from the previous unit which gives rise to many questions from individual students about the way in which items were graded. Toward the end of the period a fire breaks out in a laboratory area adjacent to that in which the students are working. The fourth day of class begins with another quiz which is followed by work on individual projects.

S 527 (54 minutes): The fifth day begins with an oral quiz. Students use the rest of the class time to work on individual projects while the teacher gives help as needed. On the sixth day the teacher assigns a statistical study and continues his development of a model for gas pressure.

PHYSICAL SCIENCE STUDY COMMITTEE (PSSC)

OVERVIEW

The five tapes in this category were made in cooperation with School District #271, Bloomington Public Schools, Bloomington, Minnesota, a suburb of Minneapolis, in February of 1970. The teacher is Mr. Robert Pintozzi; he considered the students in this class to be above average in ability.

The following supplementary materials are provided with each tape:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative questions for discussion.

The text being used by the class is Physics (Second Edition), prepared by the Physical Science Study Committee (Lexington, Mass.: D. C. Heath and Company, 1965).

Kenneth V. Jackman of the Lawrence Hall of Science, University of California, Berkeley, served as a consultant in the content editing of the tapes.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES S 520 - S 524

These tapes, covering six class periods, show activities dealing with waves and light and interference phenomena, the subject of Chapters 17 and 18 in the PSSC textbook. Prior to the classes shown on the tapes, students have been experimenting with ripple tanks, looking for the behavior of waves as they pass through a slit or as they strike plane or curved surfaces, and studying waves arising from plane and point surfaces.

S 520-524 show the class setting up, observing and then discussing the various experiments. They can be used singly although when used as a series, they more fully reflect the approach to the PSSC materials employed by this particular teacher. They may be used to discuss:

a) the pre-lab, lab, post-lab model of teaching science;
b) problems related to maintenance and repair of equipment needed for experiments in physics;
c) the extent to which this teacher exemplifies the PSSC philosophy;
d) inquiry activities carried on by students and discuss the teacher's role in an inquiry approach;
e) how a teacher can maintain a relatively free but controlled classroom atmosphere;
f) the role of the teacher in generating excitement and enthusiasm for the study of physics;
g) student-student interaction in a relatively free atmosphere; and
h) how a teacher can involve a class in using data to develop a theory.

S 520-524 should prove useful in secondary science methods courses and in-service training programs for secondary science teachers. They offer opportunities for viewers to compare their own lesson plan with one teacher's approach to using PSSC materials. If used in combination with one of the S 525-527 series, these tapes give the viewer an opportunity to contrast the same teacher using PSSC materials and those from The Project Physics Course (formerly Harvard Project Physics).

S 520 (59 minutes): The first day students review observations they have made. The teacher works with small groups making suggestions and asking questions while the students continue with their lab experiments involving the use of ripple tanks. The following Monday there is another discussion of wave fronts and the lab work continues.

S 521 (40 minutes): On the third day, the class performs an experiment taken from Chapter 18 in the PSSC text dealing with waves from two point sources and the interference pattern. Some equipment difficulties are encountered. Toward the end of the period the teacher conducts a post-lab discussion.

S 522 (52 minutes): The fourth day the teacher works with the students to develop a rather complicated principle regarding wave interference, nodal points and lines connecting them, and the relationship between water waves and similar phenomena relative to sound and light waves.

S 523 (29 minutes): The class uses a shortened period (due to scheduling of a special event in the high school) to consider a self-test prepared by the teacher. Students then work independently while the teacher tries to set up his laser experiment.

S 524 (52 minutes): In the sixth class period, the students consider an experiment set up to observe nodal points or lines coming from speakers in the classroom. They then consider other experiments which might further augment their knowledge about this phenomenon and the laser experiment which the teacher has set up.

MINNESOTA PROJECT SOCIAL STUDIES (MPSS)
ELEMENTARY

OVERVIEW

All of the twenty-six tapes available in elementary social studies were made in cooperation with Minnesota Project Social Studies. Although teachers shown are using these particular materials, it is believed that the tapes have relevance to the teaching of elementary social studies generally.

The following tapes are available:

Volume(s)	Subject	Grade	Teacher
SS 001-002	The Japanese Family	1	Mrs. Marjorie Scholl
SS 003	Geography Art related to social studies	K 1	Mrs. Kay L. Hay Miss Helen L. Johnson
SS 005-007	Economics	4	Mrs. Marilyn Teubert
SS 008	Case studies in geography	5	Mr. Ronald Groff
SS 009-011	Indians of North America	6	Mr. N. Terrance Froyd
SS 012-014	Our Global Earth	K	Mrs. Sheila Arneson
SS 015-017	Families Around the World	1	Mrs. Josephine Petron
SS 018-019	Communities Around the World	3	Miss Mona Lisa Wedin
SS 020-023	Communities Around the World	4	Mrs. Betty B. Hyser
SS 024-026	Case studies in geography	5	Mrs. Myrna Marofsky
SS 027	United States History	6	Mr. Gerald Phelan

Most of the tapes were made in Robbinsdale, Minnesota, a suburb of Minneapolis. Exceptions are the second part of Volume SS 003 and Volumes SS 005-007, 008, and 009-011, which were made in Minnetonka, another Minneapolis suburb. Recording dates for Volumes SS 001-002 and the first part of SS 003 fell during the spring of 1967; all other materials were recorded during the academic year 1968-69. The video quality is generally good; the sound quality falls below more recent recording standards. Other things being equal, users may wish to choose Volumes SS 009, 011, 014, 022, 024-026 and 027 which have the best audio quality of tapes in this group.

All of the classes shown are heterogeneous in composition, often with a wide range of abilities within a single group. Those shown in Volumes SS 005-007 and 027 tend to have a high proportion of average and below-average children; those in Volumes SS 008 and 009-011 tend to have a considerable number of above-average achievers.

Although some of the tapes are grouped in series because they feature the same class, teacher and unit, any may be used individually. Written supplementary materials which accompany each tape include:

1. Guide for locating important events on the tape.
2. Objectives for the lesson.
3. Background information providing a context for the tape.
4. Suggested uses of the tape, including questions for discussion.

Unless otherwise indicated in the description of the individual tapes, all of the tapes are considered to be useful in undergraduate courses in either general methods or social studies methods for elementary school teachers, in graduate classes concerned with curriculum development in the social studies, in in-service programs for workshops for elementary school teachers, and for teachers faced with the task of developing an articulated K through 12 social studies curriculum.

MPSS materials are currently available from the Green Printing Company, Minneapolis, Minnesota. Further revisions are in progress; multi-media packets for primary grades will be available from Selective Educational Equipment, Newton, Mass. There may be some discrepancies between the preliminary, unrevised materials used by the teachers shown in the tapes and the published versions; however, this should not present a serious problem.

The tapes were planned and edited by Dr. Edith West of the University of Minnesota, Director of Minnesota Project Social Studies.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES SS 001 - SS 002

These tapes show first grade children studying a unit on the Japanese Family. The unit is part of a program in which the children study families around the world. As in the earlier units, children have begun their study of a new culture by looking at the location in which the people lived.

> SS 001 (38 minutes): The lesson shown on this tape comes several days after children have started studying the new unit. At the beginning of the lesson the teacher has the children locate the islands of Japan on a globe and then on a large map. The class reviews the direction of north on the globe and then on the map. The teacher then has children locate the island on which the village which they will study in more detail is located. She shows the class an enlarged map which she has

drawn of this village and asks children to interpret some of the symbols and to try to visualize some of the physical features of the area. She also asks them to describe the arrangement of the buildings in the community and to compare the shopping area with that which they use in their own community.

During the last part of the lesson, children work in small groups on the floor. They model mountains out of clay, place them in an aluminum pan, build a clay valley between the mountains, and then sprinkle water on the mountains to see where the "rain" goes. The teacher moves around from group to group asking questions, encouraging children, and helping them. Children clean up after they have finished their task. They group themselves around the teacher and discuss what they have found out about what happens to the rain in mountains and to a valley within a mountain region. The teacher also asks children what kinds of crops might be grown in such a valley. Would they be the same as those grown in the land of the Hopi which they studied earlier in the year? The end of the tape shows several of the children cleaning up the floor and straightening chairs after the teacher and the other children have left for lunch.

SS 001 can be used to illustrate:

a) the extent to which first grade children can learn to use a globe and a map;

b) the use of manipulative materials to help children generalize for themselves;

c) how a teacher may encourage first grade children to cooperate with each other and to assume responsibility; and

d) the use of an inquiry strategy of teaching at the first grade level.

This tape can also be used to stimulate a discussion of classroom atmosphere and the way in which the teacher contributes to that atmosphere, ways of using group work with first grade children, and the role of the teacher during group work.

SS 002 (54 minutes): This tape shows parts of two lessons: the first shows pupils just beginning their study of families. The teacher wishes them to hypothesize about the needs of Japanese families on the basis of their earlier study of their own and other families around the world. To help them make such hypotheses, she asks children to look at booklets which they have made on their own families and to talk about the things which their families need. She then shows them the booklets which they made of the Hopi and the Chippewa families and has them identify things which these families needed and ways in which families in these cultures changed. Then the teacher charts the suggestions which children have about the probable needs of Japanese families and their ways of living.

The second part of the tape shows the lesson the following day. Children review the hypothesized needs and then work in groups on the floor looking at pictures of Japanese life in order to decide whether they should change any of the points which are on the chart or whether their guesses are correct. The teacher moves around asking questions of children in different groups. Later children gather around the teacher's chair. The class goes through the items on the chart, one by one, telling about or showing pictures which they have found which either support the idea on the chart or make it necessary to revise this idea. In addition to encouraging children to look for pictures which present contrasting information, the teacher selects four pictures which present a stereotyped view of Japanese society. She asks children what they would think life was like in Japan if they had only these pictures and no other information. Children recognize the need to use many sources of information. In future lessons they will check their guesses on the chart against additional data.

SS 002 can be used to provoke thought about:

a) the extent to which children can hypothesize about life in other lands on the basis of what they have already learned;

b) ways in which a teacher can have first grade children use pictures to test their hypotheses;

c) ways in which a beginning can be made with first grade children to help them understand the need to evaluate sources of information;

d) ways in which a teacher can use children's own drawings in a social studies lesson;

e) ways in which first grade children can work in small groups;

f) the role of the teacher during group work in an inquiry lesson; and

g) the possible advantages and disadvantages of using an inquiry strategy of teaching.

Viewers can analyze the lesson to decide where they would place it on a continuum between inquiry by children and exposition by the teacher.

SS 002 is a particularly good example of the teaching strategies recommended by the University of Minnesota Project Social Studies Curriculum Center for the primary grades.

VOLUME SS 003 (50 minutes)

This tape is divided into two parts. The first part shows a kindergarten class in a suburban school in Minnesota. Children have been studying a number of units which introduce them to simple ideas in geography. Throughout the year the teacher has been reading aloud picture stories about peoples of other countries. She has used these stories to help children learn that although ways of living differ, peoples of various races, nationalities, and religions have many things in common.

In the lesson shown on this tape, children hear a story about a boy and girl who live in England. The teacher begins the lesson by having children point out their home town on the globe, while she points out England. The teacher asks the children where they would have to cross the ocean to get to England and what an island is. She then reads aloud a picture book, Lucy and Tommy's Day, about two children in England, showing the pictures as she reads. Afterwards, children talk about the things which English children do. The teacher then has a break during which children sing songs while standing up. When the social studies lesson continues, the children compare the globe and a map of the world. They locate some of the same places on both, talk about differences between the globe and the map, and suggest reasons why they might want to use a map. After a short period of time, the teacher has children begin a game.

The second part of this tape shows sections of two lessons in a first grade class in a different suburban school. The children are completing their study of the "Hopi Family," one of the families which they study in a social studies program dealing with families around the world. In the first lesson the teacher divides children into small groups. She asks each group to plan and draw a picture to answer a specific question about Hopi life. During the rest of this lesson children work in groups while the teacher moves from one group to another, asking or answering questions which the children have. Only two brief sequences are shown of the second lesson, since the sound made of that lesson is poor. The first sequence shows the way in which the teacher has the children show their pictures and describe them to the rest of the class. In the second sequence, the teacher passes out pictures showing Hopi Indians today and asks children to identify changes in Hopi life.

Part I of SS 003 can be used to emphasize the importance of the frequent shift of procedures when attempting to conduct a social studies lesson with kindergarten children. It can also be used to stimulate a discussion of:

a) the uses of picture stories about people of other lands to help children understand ways in which they and these people are similar;
b) ways of following up the reading of such picture books in order to help children generalize;
c) ways of helping children understand the relationship between a map and a globe, ways of locating places on maps once they have identified them on a globe, and possible advantages of a map; and
d) the wisdom of trying to teach children about maps and globes at the kindergarten level.

Part II of SS 003 can be used to illustrate how art work can be combined with a social studies lesson at the first grade level (having children draw pictures as a means of checking on what they have learned about life in a different society), the use of pictures to teach the concept of social change, and the use of group work and the role of the teacher during group work in a first grade class.

VOLUMES SS 005 - SS 007

These tapes show fourth grade children who are studying basic ideas about their own economic system.

SS 005 (33 minutes): At the beginning of the lesson the teacher uses flash cards to review the meaning of "assembly line" and "specialization." She asks children to think about what they saw at the Ford Plant and about their experiences on their own assembly line during the last few days. Children compare the products which they made individually and on the class's assembly line. They also identify reasons why factory owners buy machines.

The teacher then shifts the focus of the lesson to consumer choices. She passes out catalogs from mail order houses and gives each child a dittoed order blank and a sheet which tells him how much money he has to spend in buying Christmas presents for members of an imaginary family. The teacher goes over this form with the children and then gives them the rest of the social studies period to make their "purchases" by filling out these forms. At the end of the lesson the teacher tells children to finish the task later in the day when they have some spare time.

SS 005 can be used to stimulate a discussion of:

a) *the objectives for having children set up their own assembly line in class;*
b) *the objectives for having pupils make out order forms, using catalogs from mail order houses;*
c) *alternative ways of handling a lesson designed to teach children something about factors affecting consumer choice, including ways of modifying this lesson to overcome some of the difficulties which some children had in filling out the order form; and*
d) *the role of the teacher as children work individually in class.*

The tape can be used for analysis of the discussion pattern in the class and the types of questions used to elicit certain kinds of thought.

SS 006 (62 minutes): This tape shows two consecutive lessons which follow the one shown on SS 005. During the first part of the lesson shown on this tape the children discuss some of the things which they found out as they tried to make their Christmas selections. They also identify other things on an order blank which a consumer must pay, such as a sales tax in their state and delivery charts. Next, the teacher uses a feltboard to tell the story of the Greene family. She identifies its income and has children use cutouts to illustrate what the family spends for a number of major items. Finally, she asks the children how they would spend the thirty dollars which the family has left. It becomes obvious that children make these choices on the basis of personal preference. The teacher then poses a series of other choices which children might face as consumers. At the end of the first lesson on the tape, the children identify a number of factors which have affected their choices.

Part II shows the lesson the following day. The teacher uses newspaper advertisements to introduce factors which affect where the children's parents buy certain items. She asks children what their parents do before they shop for a major purchase such as a new car. Then she divides the class into groups and gives each group a newspaper. The groups made up of boys are to identify the car which they will buy and where they will buy it. The groups of girls are to plan a dinner for a family and decide where they will buy the foods needed. The rest of the tape shows the children at work on this project.

SS 006 can be used to illustrate both how a teacher varies activities within one lesson for fourth grade children and the kinds of activities which can be used to promote generalizing. It can also be used to stimulate a discussion about:

a) the length of time which should be spent on some of the activities used;

b) the extent to which these activities create interest among children;

c) the extent of involvement of different children in these activities;

d) ways in which concrete examples can be used to develop economic concepts and generalizations;

e) effective ways of using group work in a fourth grade class; and

f) the role of the teacher during group work.

SS 007 (53 minutes): This tape shows two consecutive lessons which follow those shown on tape SS 006. For the three days prior to the first lesson shown on this tape, the class studied factors affecting consumer choices. The teacher now shifts the focus of attention to the effects of supply and demand upon prices. She uses candy bars first to introduce differences in ways in which goods might be divided among people and then to develop a table showing the demand in this class for a candy bar at different prices. Examples of cereal and salt are used to help children understand differences in demand for different kinds of goods when prices change.

In the second lesson shown on this tape, the teacher asks children to try to figure out how consumer choices affect production decisions. She names several common items and asks children which they would want to produce if they had to make a choice. Then she lists a series of items most of which are no longer used in our society and asks the children whether they would like to start a business producing any of these items.

SS 007 should prove helpful in illustrating: the way in which a teacher can use children's own experiences and everyday objects to teach economic concepts; some of the difficulties which arise in having children generalize from concrete examples and the extent to which they can do so; and an inquiry strategy for teaching economic concepts. The tape can also be used to stimulate a discussion about:

a) the extent to which children of this age level can learn the concepts of supply and demand;
b) the length of time which might be spent on discussions with fourth grade youngsters;
c) possible ways of modifying an activity to avoid some of the problems which arose in the last lesson; and
d) kinds of questions which might be asked to promote generalization.

Those who view the tape can also be asked to analyze the discussion pattern at different points in the lessons.

VOLUME SS 008 (58 minutes)

This tape shows parts of three lessons in a fifth grade class. Children are studying a geography program which uses case studies of different regions to teach the idea that people use their physical environment in terms of their cultural values, perceptions, and level of technology. These case studies use a sequent-occupance approach -- that is, children study the use of an area at different cross-sections in time in order to find out how people of different cultures and different levels of technology have used the area.

The first part of SS 008 shows children beginning their study of how the early Indians used Minnesota, and more specifically, the area in which the Twin Cities are now located. As the first lesson begins, children summarize their ideas from the previous lesson about how a present-day map of the upper Midwest would have to be changed to represent a map of 1650. The teacher then has pupils study a map transparency of vegetation and soil types in Minnesota. He asks children to hypothesize orally about the types of dwellings which Indians would have used in the Southwestern part of Minnesota. Each child then hypothesizes on paper about Indian dwellings in the Northeastern part of the state. In the last part of the first lesson the teacher shows the class pictures.

Some show only physical features, and children are asked to identify the probable area in Minnesota in which these pictures were taken. The teacher also shows the class pictures of sod houses used by early white men in Southwestern Minnesota. Children hypothesize about whether or not the early Indians also used such houses.

The second part of the tape shows the same class the next day. After reviewing the previous lesson, the teacher projects a map of vegetation and asks whether or not one would find any types of vegetation in some of these vegetation zones other than those indicated by the key on the map. The teacher then shifts the focus of the lesson. He passes out worksheets listing questions to be answered about the early Sioux Indians in Minnesota. Children take out two text books which they can use in locating answers to these questions. The teacher then spends time helping the class understand how to make effective use of the index in locating information about the Sioux. The class then divides up into groups to locate information about the Indians. The tape shows only selected sequences of this group work.

The last part of SS 008 shows part of another lesson in which children are discussing their findings, including their findings about the types of dwellings in which the Sioux Indians lived.

SS 008 can be used to stimulate a discussion of:

- *a) the types of maps suitable for fifth grade children;*
- *b) possible objectives to be achieved from a lesson in which pupils hypothesize from a map;*
- *c) possible follow-up lessons after students have developed such hypotheses;*
- *d) ways of developing greater skill in interpreting maps;*
- *e) types of audio-visual equipment which might make the lesson more effective;*
- *f) reasons for reviewing lessons from day to day;*
- *g) ways of developing skill in using the index in a book;*
- *h) possible reasons for using group work, the advantages and disadvantages of group work, giving directions for group work, and the role of the teacher during group work;*
- *i) patterns of discussion and types of questions used in a discussion; and*
- *j) a possible follow-up lesson to promote generalization on the basis of data discovered.*

VOLUMES SS 009 - SS 011

This series shows sixth grade pupils who are studying United States History. They are in the middle of the first unit which deals with Indians in North America before the coming of the white man. It focuses upon two Indian cultures, the Aztecs and Iroquois, which came into contact later with different European cultures.

SS 009 (36 minutes): This tape shows two lessons which focus upon the Aztec market place. In the first lesson children draw upon what they have read in fictionalized accounts of Aztec life to discuss briefly the barter which took place in the market and to identify a number of objects which were exchanged. The teacher accepts all suggestions but says that pupils may wish to check on some of them later in the day. A girl proposes that the class set up their own market and pupils discuss how they may do so. Later in the day, in a session not taped, the pupils identify the roles which each will play and the items on their morning's list of things exchanged in the market place which they will use the next day. The last part of this tape shows the children bartering goods in an Aztec market place.

SS 009 can be used to stimulate a discussion of:
- a) *possible reasons for having children spend time listing items exchanged in the market place;*
- b) *the teacher's role during a discussion;*
- c) *ways of having children plan dramatic play;*
- d) *advantages and disadvantages of dramatic play; and*
- e) *the role of the teacher during dramatic play.*

SS 010 (56 minutes): The first part of this tape shows the children categorizing items found in the Aztec market place according to the extent to which they were used by different social classes. Pupils then discuss the fact that luxuries mean different things to different people. They also identify the ways in which the market affected different groups in Aztec society. During the last part of this lesson the teacher shows pupils several slides and asks them to try to figure out what these slides represent. He suggests that further reading will help them make this identification.

The second part of SS 010 shows the next lesson. Using what they have learned in their fictionalized accounts of life among the Aztecs, pupils discuss Aztec farming. Two boys show the class a model which they have made of the floating gardens. The teacher then projects a slide of the floating gardens and points out certain details. He projects another slide which shows an Aztec drawing and asks the class to guess what this drawing represents. The teacher tells pupils to check their guesses as they do further reading.

SS 010 can be used to stimulate a discussion of:
- a) *the pros and cons of having pupils try to guess what pictures represent rather than having the teacher tell them immediately;*
- b) *the role of the teacher in an inquiry process;*
- c) *possible follow-up lessons when an inquiry approach is used with slides;*

d) ways of helping pupils categorize data and the purpose for having them do so; and

e) the extent to which sixth grade pupils can draw upon fictionalized accounts for data about a culture.

The tape can also be used to analyze discussion patterns and types of questions used to elicit certain kinds of thought.

SS 011 (40 minutes): This tape shows the teacher having children review the fictionalized accounts they have been reading to identify aspects of the political structure among the Aztecs. After giving directions, the teacher moves around the room helping pupils who have questions. He then asks class members what they have found out about the political structure. In order to emphasize the importance of cultural perceptions, the teacher asks pupils why Montezuma went out to greet Cortez. Finally, the teacher projects several slides which show a reconstruction of the Aztec city which they have been studying. He asks them to compare the slide showing the city as a whole with the map which each of them drew earlier after listening to a description of the city. The teacher also calls the attention of children to the difficulty of building the Aztec temples.

SS 011 can be used to stimulate a discussion of:

a) ways of using fictionalized accounts of other cultures to obtain information about the culture, not just the narrative concerning the people involved;

b) ways of wording questions to elicit certain kinds of thought processes;

c) the discussion pattern among teacher and pupils;

d) ways of using slides to help children check on data; and

e) where this lesson fits on a continuum between exposition by the teacher and inquiry by pupils.

VOLUMES SS 012 - SS 014

This series shows a group of kindergarten children involved in an experimental program, The Earth as the Home of Man. The focus is upon geography and the many peoples of the world. At present, the teacher is spending some time on the unit, "Our Global Earth." Lessons in this unit are spread out over a period of time. The teacher has adapted the resources unit, using some of the objectives but not the activities suggested.

SS 012 (46 minutes): In this tape children identify a number of landforms which they have seen in pictures, filmstrips, and films. The teacher writes the names of these landforms on a chart and draws a simple picture to represent each. She has children spend the rest of the period drawing their own pictures of different landforms.

SS 012 can be used to provoke thought about characteristics of children at this age level, differences in maturity of kindergarten children, possible reasons for the adaptations which the teacher has made in the unit, and the pros and cons of trying to use such a social studies program with kindergarten children.

SS 012 should prove most useful with an undergraduate class of students preparing to work with kindergarten children.

SS 013 (37 minutes): In this lesson, pupils are studying landforms. After an introductory song, not really a part of the social studies period, the children show the rest of the group pictures which they drew of landforms the day before. Children then gather around a table and plan the layout for a group of landforms which they will model from clay. The rest of the period is spent in making the clay landforms which will be placed upon this table. Some children work at the table itself; others work in other parts of the room. While they are working, children sing different versions of "The Bear Went Over the Mountain." At the end of the period, children clean up their materials.

SS 013 can be used:

- *a) to focus upon varied activities used by the teacher;*
- *b) to provoke thought about the length of time which can be spent upon activities devoted to subject matter area such as social studies;*
- *c) to initiate a discussion of differences among kindergarten age children and ways of working with children of this age level;*
- *d) to compare the use of drawings and the making of clay models with children of this age level;*
- *e) to provoke thought about whether or not making landforms of these types really helps children learn about landforms or develops misconceptions about them.*

The tape should prove particularly useful in an undergraduate course for those preparing to be kindergarten teachers.

SS 014 (45 minutes): The first part of the tape shows preliminary activities at the beginning of a session. Children sing a "good morning" song, take attendance, change the calendar, give the pledge of allegiance, and march behind a boy holding a flag as the teacher plays a song. The teacher then turns to a social studies lesson. Children sit around a table on which they have made landforms, and different children explain some of the landforms which they have made. The teacher then has children gather around a relief map of the United States. After identifying the map, their own state, and mountains on the map, children pour a little water on the top of some of the mountains and watch what happens to it. They notice that the water eventually flows along certain lines which they identify as the symbols for rivers. They also notice that if they pour enough water on the top of the mountains or in Northern Minnesota on the Mississippi River, the water eventually flows into either an ocean or the Gulf of Mexico. Children next gather around the teacher while she shows them pictures in a picture book of geography. She uses the book as a means of reviewing some of the landforms. The teacher then ends the lesson and has children stand up and stretch to a song. Children also take turns enacting a story, "Three Little Billy Goats Gruff." The last part of the tape shows children deciding what to do in a free activity period and then engaging in a variety of activities, individually and in groups.

SS 014 should prove useful in illustrating the variety of activities which a kindergarten teacher uses and the way in which she starts the kindergarten session for a day. It can also be used to illustrate the way in which children enact a story, and differences in behavior among children of this age level. Finally, the tape can be used to provoke thought about ways of teaching children about different landforms and maps.

SS 014 should prove most valuable in an undergraduate course for those preparing to be kindergarten teachers. The parts of the tape showing the social studies lesson might also be used in a graduate course focusing upon instructional practices on curriculum development, or in an in-service program for teachers who are working on curriculum development from K-6 or K-12.

VOLUMES SS 015 - SS 017

In this series a first grade class studies an experimental program on Families Around the World. Earlier in the year, children studied the Hopi family and the Chippewa family and compared these families with their own. They are now engaged in studying the Quechua family. The Quechua unit, like all the others, begins with an examination of the location of the area in which the family lives. In lessons prior to the ones shown on these tapes, children have located the area in terms of a particular place on the globe, its situation in relationship to their own home town, and the site characteristics. (The Quechuas are descendants of the Incas and live in the Peruvian highlands of South America.) They have also studied the highland area and the way in which the Incas lived in this area.

SS 015 (43 minutes): In the two lessons shown on this tape, the teacher has children identify some of the basic needs of families and then focuses upon Quechua homes.

Children look once more at pictures of the physical site in which the Quechua live and hypothesize about materials which might be used in making Quechua homes. They then examine pictures of Quechua homes and finally listen to stories about Quechua children in order to check upon their guesses. Children also use dirt and stones to build model terraces which are used by the Quechua in growing their food. They also draw pictures of terraces and tell other members of the class about pictures which they have drawn.

SS 015 can be used to provoke thought about:

- *a) ways of using overlay maps with an overhead projector;*
- *b) the types of questions which can be used to promote certain kinds of thought processes;*
- *c) ways of handling suggestions during a state of hypothesizing;*
- *d) ways of using pictures to stimulate hypotheses and to check upon hypotheses;*
- *e) ways of using stories about children of other lands to teach children about other cultures;*
- *f) ways of teaching children to accept diversity and understand other ways of living, rather than developing negative ideas about people who live in different ways than we do;*
- *g) reasons for having children build models and draw pictures for a social studies lesson; and*
- *h) the place of these lessons on a continuum between inquiry by children and exposition by the teacher.*

SS 016 (43 minutes): This tape shows parts of two consecutive lessons. Children gain more information about Quechua homes by listening to the teacher read a few more pages of a story about a Quechua boy. Then the teacher asks if children would like to make models of Quechua homes, and the children discuss the materials which they might use. Afterwards, the teacher turns to the need for food. Rather than beginning with foods which the Quechua use, the teacher asks children to identify their favorite foods and to draw pictures of things which they have to eat at breakfast, lunch and dinner. The teacher makes lists of the things which they have pictured. In the second lesson shown on this tape, children identify types of food which are common to the different meals. They then draw upon what they have learned about the Incas to make guesses about the kinds of foods which the Quechua might eat. The teacher reads aloud another part of a story about a Quechua boy. Children react strongly to the fact the the Quechua eat guinea pigs. They discuss reasons for their reactions and why the Quechua would like such meat. Children then draw pictures of foods used by the Quechua.

SS 016 should prove useful in provoking thought about:

a) the kinds of questions which can be used to stimulate different types of thought processes;
b) possible reasons for having children make models;
c) the pros and cons of having children talk about the kinds of food they eat, before turning to the kinds of food which other people eat;
d) ways of handling children's reactions to foods eaten by people in other cultures so that they will learn to accept such diversity, rather than developing negative attitudes toward other people;
e) ways of using stories about children of other lands to help children learn about other cultures;
f) possible reasons for having children draw pictures in connection with a social studies lesson; and
g) the length of time which can be spent profitably on a social studies lesson in a first grade class.

SS 016 should prove particularly useful in an undergraduate course in social studies methods. Parts of it might also be used in a graduate course on instructional practices, or the social studies curriculum, or in an in-service workshop for social studies teachers.

SS 017 (38 minutes): In the lesson shown on this tape, children construct a Quechua village by placing their houses on a large sheet of paper on which a plaza has been drawn. Children draw in streets from the houses to the plaza and construct a fence around the plaza. They also describe the models which they have made. The teacher reviews data about Quechua homes and the village during this last activity. During the last part of the lesson, the teacher shifts the focus of attention to Quechua clothes. Children identify types of clothing worn from a series of pictures.

SS 017 can be used to provoke thought about:

a) possible reasons for having children make models of homes and a village of people living in another country;
b) whether or not the time taken for such activities is justified by what they learn from it;
c) ways of involving as many children as possible in an activity such as this;
d) ways of using a village which children have constructed in other parts of the unit as they study how the people live;
e) the types of questions which can be asked to provoke certain kinds of thought; and
f) ways of using pictures to help children gather data about the people of other countries.

SS 017 should prove particularly useful in an undergraduate class in social studies methods for elementary school teachers. It might also be used in an in-service program for teachers.

VOLUMES SS 018 - SS 019

These tapes show a third grade class studying an experimental social studies program on Communities Around the World. At the moment, pupils are studying a unit on the Manus.

SS 018 (48 minutes): In the lessons shown on this tape, children look at pictures of Manus homes and hypothesize about materials used to build them and about possible advantages and disadvantages of such homes. They check their guesses against data in written accounts. Children also draw pictures of Manus homes.

SS 018 can be used to provoke thought about:

a) an inquiry strategy of teaching;
b) effective use of slides in a classroom;
c) the use of drawing activities in a social studies classroom;
d) discussion patterns; and
e) kinds of questions which can be asked to stimulate different types of thought.

SS 019 (40 minutes): This tape shows parts of three consecutive lessons. In the first lesson, the teacher returns to the list of hypotheses which children developed. After they have examined their list of hypotheses, the teacher reads aloud the description of Manus homes once again so that children can check on whether or not they now have enough evidence to decide whether their guesses were correct or not. The teacher reads aloud additional information and children review the series of slides to check further details about which they are unsure. Again the teacher shows the slides and asks children to try to decide how easy it would be to build such homes out over the water. The teacher also shows slides of outrigger canoes and then of some of the Manus people. After several children laugh because the people are wearing so little, the teacher tries to help children understand the Manus way of living.

SS 019 can be used to provoke thought about:

a) the use of an inquiry strategy of teaching;
b) effective use of slides in a social studies lesson;
c) using analogies in a social studies lesson;
d) discussion patterns;
e) types of questions which can be used to promote different types of thought;
f) ways of handling reactions of children who think certain ways of behaving in other cultures are strange; and
g) the use of details in lessons designed to help pupils generalize.

VOLUMES SS 020 - SS 023

This series shows a fourth grade class studying an experimental program on Communities Around the World. At the moment they are studying a unit on "A Village in India." Before turning to social and economic conditions, children are looking at the geography of India. Prior to the lessons shown on these tapes, they have located India in terms of its position on the globe and its relationship to the United States. They have also examined the physical features of India.

SS 020 (59 minutes): In this lesson they focus upon climate. Using a physical map of India, they locate three cities and then hypothesize about the climate of these cities. Later they check their hypotheses against climatic charts.

SS 020 can be used to stimulate a discussion about:

- a) *ways of teaching pupils to apply previously-known concepts and generalizations in the development of hypotheses;*
- b) *ways of teaching pupils to read climatic charts;*
- c) *ways of teaching pupils to interpret map symbols in terms of a map legend;*
- d) *the pros and cons of having pupils make maps of different map patterns;*
- e) *principles which can be used to decide how long to continue a social studies lesson at this grade level;*
- f) *the importance of varying activities within one lesson;*
- g) *the discussion pattern and the way in which the teacher perceives her role in the discussion;*
- h) *types of questions which can be used to stimulate different kinds of thought; and*
- i) *the place of this lesson on a continuum between inquiry by pupils and exposition by the teacher.*

The tape also can be used to analyze the geographic ideas being taught and ways of avoiding geographic misconceptions. In addition, it can be used for interaction analysis.

SS 021 (44 minutes): In the lesson on this tape, the pupils examine a chart which compares average temperatures in January and in the hottest month of the year for four different cities. It also compares the annual rainfall for these cities. Pupils identify the city with the greatest range in temperature and discuss reasons for the differences in temperature and rainfall. Pupils also interpret two maps, one of agricultural production and one of other types of resources. They then compare the area of India with that of the United States and examine data on the size of the population of India, the United States, the USSR, and China. They set up hypotheses about where most of the people in India live and then check their hypotheses against a population density map.

SS 021 can be used to illustrate ways of teaching pupils to read climatic charts and bar graphs and to interpret maps in terms of the map legend. It can also be used to provoke thought about ways of preventing the development of geographic misconceptions. Moreover, the tape lends itself to an analysis of the interaction between teacher and students, and techniques of questioning.

SS 022 (55 minutes): In the lesson shown on this tape, pupils turn from their study of the geography of India to life in an Indian village. The teacher uses graphs to help pupils understand the proportion of people who live in villages. She then gives an exercise on distinguishing between fact and opinion, so that when they look at Indian ways which differ from those in this country, children will realize that people of India feel that their ways are good even though we might not like to live in these ways. The class then turns to a story of a wedding and arranged marriages. Pupils talk about how the people of India feel about this type of marriage system. Children then examine sketch maps of an Indian village and of the farm plots for the village. They compare what they see with what they know about small towns in this country. At the end of the lesson, children taste curry sauce which the teacher has made during the lesson.

SS 022 can be used to provoke thought about:

a) the use of different types of graphs in the intermediate grades;
b) the use of sketch maps;
c) the use of exercises on distinguishing between fact and opinion;
d) the pros and cons of reading aloud material when pupils have the material in front of them;
e) the importance of avoiding the use of certain words which may lead to stereotypes or misconceptions;
f) principles which may be used in deciding when to probe certain comments which indicate misconceptions;
g) the use of comparisons with things close to the lives of pupils;
h) possible reasons for having pupils eat foods from other countries about which they are studying;
i) the discussion pattern in the class and the role of the teacher in the discussion;
j) the tempo with which a discussion should be carried on in an intermediate grade class; and
k) kinds of questions which can be used to stimulate different kinds of thought.

SS 023 (49 minutes): In the lesson shown on this tape, pupils find out more about the family structure and the caste system with its reciprocal relationships between those who do different kinds of work.

SS 023 can be used to provoke thought about:

a) the effectiveness of the specific activities in achieving the teacher's objectives;
b) the interaction between teacher and pupils;
c) the tempo of the discussion;
d) the questioning technique used;
e) possible reasons for reading aloud an account which pupils have in front of them;
f) other possible ways of handling some of the topics introduced in the lesson;
g) the extent to which pupils are able to understand how people in other societies view their ways of living; and
h) possible reasons which the teacher may have had for the adaptations which she has made in the resource unit.

VOLUMES SS 024 - SS 026

The fifth grade class shown in this series is studying an experimental course in geography which focuses upon the United States, Canada, and Latin America. It uses sequent-occupance case studies to help develop the idea that man uses his physical environment in terms of his cultural values, perceptions, and level of technology. At the moment pupils are studying a unit on The Northeast and a case study on New York City. Pupils have already looked at the physical features of the city's site, at the early Dutch settlement with its fur trading and poltroon landowning system, at New York City in the late eighteenth century, and at the city in the middle of the nineteenth century. Now they turn their attention to modern New York City.

SS 024 (49 minutes): In the lesson shown in this tape, children hypothesize about possible changes which will have taken place since the mid-nineteenth century and test their hypotheses against a number of pictures. After they have decided that not many people can live in one-family homes on Manhattan, they look at a map which shows the percentage of people living in one-family homes in various parts of the city. The teacher gives pupils a worksheet on which they answer questions about what they see at different points in an imaginary car trip from New Jersey to Manhattan Island. They study pictures to answer these questions, and they note where they are at each point on a map of the area. Children then hypothesize about transportation problems which might face New Yorkers.

SS 024 can be used to provoke thought about:

- *a) the importance of a review at the beginning of a lesson:*
- *b) questioning techniques;*
- *c) the types of maps which pupils at the fifth grade level can use and ways of teaching pupils to interpret maps in terms of the map legend;*
- *d) an inquiry strategy of teaching and the role of the teacher using such a strategy;*
- *e) the use of pictures to stimulate hypotheses and to test hypotheses, and ways of encouraging pupils to look at pictures to answer questions;*
- *f) the use of comparisons in developing geographic understandings;*
- *g) criteria for good graphs; and*
- *h) possible follow-up lessons.*

SS 025 (56 minutes): In the two lessons shown on this tape, pupils test their hypotheses against various kinds of data. The lessons also focus upon the dependency of New York upon technology and upon the services of others. In the last lesson, pupils focus upon other problems facing New Yorkers.

SS 025 can be used to provoke thought about:

- *a) the use of maps and charts in intermediate grade lessons and the types of graphs and charts which can be used at this level;*
- *b) the effectiveness of the activities in achieving the teacher's objectives;*
- *c) the importance of varying activities within one lesson;*
- *d) an inquiry strategy of teaching and the role of the teacher who is using such strategy;*
- *e) the kinds of questions which can be asked to elicit different types of thought; and*
- *f) ways of helping pupils put themselves in the place of other people so that they can understand the impact of events upon the people involved.*

SS 026 (57 minutes): In this tape pupils examine the types of occupations found in New York City and reasons for the high number of small industries and services rather than heavy manufacturing. Pupils discuss the advantages of New York's location for businesses, and they look at transportation facilities and types of imports and exports. Finally, they turn to the place of New York City in the region. They work individually or in groups to generalize about characteristics of the Northeast so that they can compare New York City with the region as a whole.

SS 026 can be used to provoke thought about:

- *a) possible advantages and disadvantages of an inquiry strategy of teaching;*
- *b) ways of teaching pupils to interpret maps;*
- *c) types of maps which fifth grade pupils can use;*
- *d) effective ways of using pictures and charts in a social studies lesson;*
- *e) the importance of developing skills in social studies;*
- *f) the importance of taking time to have pupils generalize on the basis of data;*
- *g) ways of using case studies of cities to teach pupils about the geography of a region;*
- *h) ways of arranging a classroom to facilitate the use of small groups and to make efficient use of reading materials when the teacher has a variety of books but not enough of any one book for each pupil use; and*
- *i) techniques of questioning.*

VOLUME SS 027 (44 minutes)

The sixth grade pupils shown on this tape are studying a course on United States History. The tape shows parts of three consecutive lessons from a unit on "The English Settlement of North America." At the moment, pupils are focusing upon the settlement at Jamestown. In an earlier lesson, pupils identified a number of reasons why the settlers came to Jamestown. Half of the class members have been reading books on special topics about Jamestown while the other members have been reading books about the settlement at Plymouth. In the sequences on this tape, pupils draw pictures of the way in which they visualize colonial homes in Jamestown. Later they compare their drawings with the pictures of homes shown in a film. Some of the sequences of the tape focus upon the way in which the teacher uses the story of Captain John Smith. Pupils compare the film presentation and parts of Smith's own story. A few pupils add additional information from books. Pupils draw upon Smith's own account, which the teacher has recorded on tape, to try to answer several questions about early Jamestown. In the last sequence on the tape, pupils work in groups to prepare brief skits on events in early Jamestown. Only one of these skits is shown on the tape.

SS 027 can be used to provoke thought about:

- *a) ways of teaching pupils the importance of evaluating sources of information and criteria which can be used in evaluating sources;*
- *b) ways of presenting information to a class when many children in the class are poor readers;*

c) ways of using group work in an intermediate grade class and possible advantages or disadvantages of using group work;
d) the use of a list of questions to guide discussion in groups and in the class as a whole; and
e) ways of adapting a resource unit to a specific class.

SS 027 should prove particularly useful in an undergraduate course on social studies methods for elementary school teachers.

MINNESOTA PROJECT SOCIAL STUDIES (MPSS)
JUNIOR HIGH

OVERVIEW

A total of seventeen tapes of junior high social studies were prepared in cooperation with Minnesota Project Social Studies. Although teachers shown are using materials prepared by that group, the content of the tapes is relevant to the teaching of social studies at this level generally.

The following tapes are available:

Volume(s)	Subject	Grade	Teacher
SS 200	Socialization	7	Mr. Bruce E. Tipple
SS 201-202	The Family	7	Mr. Keith Phifer Mrs. Sue Horovitz
SS 203-205	Intergroup Relations	7	Mr. Robert W. Beery
SS 206	American Political System	8	Mr. James R. Olson
SS 207	American Political System	8	Mr. James R. Olson Mr. Michael J. Rockler
SS 208-209	American Political System	8	Mr. Michael J. Rockler
SS 211-215	American Political System	8	Mrs. Linda K. Blaisdell Mr. Roger K. Wangen
SS 216-217	Farm Problems (Economics)	9	Mrs. Miriam R. Kelley

The tapes were recorded in three different schools: Volumes SS 203-205 were made in the former University of Minnesota High School which was a laboratory school; Volumes SS 200, 206, 207, 208-209, and 216-217 were made at Marshall-University High School in Minneapolis which represents a union of the laboratory school with an urban school; and the remaining tapes were made at Minnetonka East Junior High, a suburban school. With the exception of Volumes SS 203-205, which were recorded in the spring of 1966, the material was taped during the winter of 1969. The video quality is generally good; the sound quality falls below more recent recording standards but is deemed usable.

All of the classes shown are heterogeneous in composition, often representing a wide range of abilities. Those appearing to have substantial number of above-average students appear in Volumes SS 200, 203-205, 206, 208-209, 216 and SS 217.

Although some of the tapes are grouped in series because they feature the same class, teacher and unit, any of them may be used individually. Written supplementary materials which accompany each tape include:

1. Guide for locating important events on the tape.
2. A list of objectives for the lesson.
3. Background information providing a context for the tape.
4. Suggested uses of the tape including illustrative discussion questions.

Unless otherwise indicated in the description of the individual tapes, all of the tapes are considered to be useful in undergraduate courses, in either general methods or social studies methods for secondary school teachers, in graduate classes concerned with curriculum development in the social studies, in in-service programs or workshops for secondary school teachers, and for teachers faced with the task of developing an articulated K through 12 social studies curriculum.

MPSS materials are currently available from the Green Printing Company, Minneapolis, Minnesota. Further revisions are in progress; ultimately, the junior high materials will be available from Addison-Wesley, Reading, Massachusetts. There may be some discrepancies between the preliminary, unrevised materials used by the teachers shown in the tapes and the published versions; however, this should not present a serious problem.

The tapes were planned and edited by Dr. Edith West of the University of Minnesota, Director of Minnesota Project Social Studies.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUME SS 200 (51 minutes)

This tape shows two lessons in a seventh grade class which is studying an experimental course in sociology. Pupils have nearly completed a unit dealing with socialization. In the first lesson, the teacher turns to the idea that socialization continues throughout one's life. The teacher asks pupils to identify the kinds of roles which people may assume as they get older and aspects of behavior which may change because of these new roles. Students suggest roles in terms of both personal experiences and biographies which they have been reading. The teacher then asks whether or not the data which they have just been suggesting support or refute a theory which they developed earlier that socialization continues throughout life. He projects a series of slides showing first an aerial view of a large city and then views of towns in underdeveloped societies. He asks students how their lives would change if they were to move from one of these places to another at ten year intervals. Students suggest various ways in which they would have to be re-socialized.

In the second lesson, the teacher returns to a statement made by one of the students the day before to the effect that children learn to obey parents. He asks pupils why they obey their parents and other people and why they obey certain laws. Students suggest a variety of reasons, including the development of conscience. The teacher then turns the discussion to the question of why one student differs from another. Pupils suggest a number of factors, including differences in socialization. During the last part of the lesson, the teacher asks each pupil to make a list of ten descriptive words which his parents might use about him, ten descriptive words which a teacher might use about him, ten descriptive words which his friends might use about him, and ten descriptive words which he would use about himself. After pupils have worked for a time, the teacher tells them to read an article on "The Self" for the next day. They are to try to decide whether their lists have any bearing on the ideas in the article.

SS 200 can be used to illustrate:
- *a) the use of biographies, personal experiences and slides in developing sociological ideas;*
- *b) the way in which a teacher can encourage pupils to test theories and revise them in the light of new data;*
- *c) the use of a pupil's comment to initiate a discussion; and*
- *d) a way of developing background for reading an article which deals with a difficult concept.*

The tape can also be used to initiate a discussion of the importance of a review at the beginning of a lesson, the effectiveness of this lesson in teaching the concepts and generalizations identified as objectives, and the role of the teacher in a lesson which uses an inquiry strategy of teaching.

VOLUME SS 201 - 202

These tapes show a seventh grade social studies program which uses flexible scheduling and team teaching. The teachers are working with pupils in a large room equipped with movable partitions to separate classes. The pupils are studying an experimental course in sociology and are part way through a unit on "The Family."

SS 201 (45 minutes): This tape contains parts of three consecutive lessons; the first sequence on the tape shows one of the teachers discussing the questionnaire which pupils will take home to obtain data on families of seventh grade students attending this junior high school. The teacher then introduces a reading assignment by having pupils identify the meaning of the term sub-culture before they read selections on families in different sub-cultures in this country.

The next lesson on the tape is devoted to the tallying of data from the questionnaire which pupils and their families have completed. Following general instructions, pupils work in small groups tallying the data. Both teachers are available to help these groups. The tape also includes a few sequences from the next class session in which pupils use the data from the questionnaire to test a series of generalizations about families in their school district.

SS 201 can be used to illustrate a classroom situation in which there are no real walls separating one class from another, and a team teaching situation in which two teachers use both a large group and small groups within a lesson. This tape can also be used to provoke thought about:

a) ways of introducing a questionnaire;
b) ways of having pupils tally questionnaire data;
c) ways of using questionnaire data to test hypotheses;
d) the importance of careful use of terminology when referring to hypotheses, facts and inferences from facts;
e) ways of introducing a reading assignment;
f) the extent of interest and pupil participation in the small groups as compared to the large group;
g) principles which might be used in deciding when to use large or small groups within a flexible scheduling program;
h) the advantages and disadvantages of using movable partitions rather than regular classroom walls; and
i) the position of these lessons on a continuum between exposition by the teacher and inquiry by pupils.

SS 202 (39 minutes): In the lesson shown on this tape, pupils look first at census data on American families. Working with one teacher in a large group, they generalize from the data shown on a mimeographed table. Approximately half way through the period, the second teacher gives pupils an assignment on which they are to work individually or by consulting their neighbors around the table. Pupils are to compare the generalizations which they have reached about American families on the basis of census data with the ideas about American families presented in TV shows or comic strips. They are to decide how accurate the TV and comic strip presentations are. Pupils work on this assignment for the rest of the period.

SS 202 can be used to stimulate a discussion about:

- *a) the advantages and disadvantages of using a large room with movable partitions to separate classes and groups;*
- *b) other ways in which these teachers might use the movable partitions;*
- *c) the purposes for which a team of teachers might use a large group session and those for which they might use small group meetings (more specifically, the pros and cons of using a large group session to teach pupils to interpret tabular data);*
- *d) the pros and cons of using both teachers in this lesson;*
- *e) the order of presentation of ideas in a lesson (more specifically, the pros and cons of telling pupils how they will use the census data in relationship to the TV programs before they are asked to interpret the data);*
- *f) ways of clarifying an assignment;*
- *g) the possible purposes for the activities used in this lesson; and*
- *h) ways of adapting resource units to specific classes.*

VOLUME SS 203 - 205

This series shows a seventh grade class which is studying an experimental course in sociology. Pupils have recently begun the last unit in the course on "Intergroup Relations." Each pupil has been reading a biography or a fictionalized account of a minority group member who faced serious discrimination.

SS 203 (32 minutes): In the lesson shown on this tape, the teacher conducts a discussion based upon the individualized reading. After reviewing the difference between discrimination and prejudice, the teacher asks pupils to identify the types of discrimination faced by individuals in their books. Pupils also begin to identify different kinds of reactions of minority group members. During the last part of the period, the teacher asks pupils to take notes on the points listed on the chalkboard and to continue reading their books so that they will have finished them before the class discusses the way in which these books end.

SS 203 can be used to illustrate a discussion based upon a wide reading program, the use of a wide reading program to develop concepts and generalizations, and the role of the teacher during a study period. The tape can also be used to stimulate a discussion of:

- *a) the way in which a wide reading program can be used to handle the problem of individual differences in a class;*
- *b) other purposes which might be achieved by using such a wide reading program;*

- c) *the pros and cons of using a discussion based upon this wide reading program rather than reports;*
- d) *possible uses of fiction and biography in a social studies program;*
- e) *reading interests of pupils of junior high level;*
- f) *types of questions which can be asked to elicit different types of thought processes;*
- g) *the classroom atmosphere and factors contributing to this atmosphere; and*
- h) *possible ways of following up this lesson.*

SS 204 (37 minutes): As the lesson on this tape begins, the teacher asks pupils to use reading notes in a brief review session. The teacher begins a discussion of the advantages and disadvantages of books of fiction and biographies as sources of information about race relations. As pupils make suggestions, the teacher writes them on the chalkboard. Pupils illustrate their suggestions by using examples from the books which they are reading. Toward the end of the period, the teacher gives pupils a chance to take notes on the basis of the lists on the chalkboard. He then reminds the class that several pupils have stated that they need to look at other sources of information to check on the accuracy of the facts which they have found in their books. He asks pupils at each table to work together to try to list as many different sources as possible. After five minutes, the teacher asks how many sources each group has identified. The groups which have identified the largest number read their lists aloud.

SS 204 can be used to illustrate the way in which a teacher uses a wide reading program to help pupils develop skills in evaluating sources of information, and the use of an inquiry strategy to teach pupils to evaluate sources of information. The tape can also be used to stimulate a discussion of:

- a) *types of questions which can be used to elicit different types of thought processes;*
- b) *the comparative advantages of having seventh grade pupils take notes during a discussion or after the disucssion has ended;*
- c) *ways of dividing a class into buzz groups and the purposes of buzz groups;*
- d) *the importance of careful directions before buzz groups begin work; and*
- e) *the classroom atmosphere and factors contributing to this atmosphere.*

SS 205 (44 minutes): In the lesson shown on this tape, the teacher asks pupils to review and add to their list of factors which should be considered in evaluating biographies and books of fiction as sources of information. He also returns to the question of how pupils gather information to check on the accuracy of the books which they have read.

Pupils identify questions which they should raise about the authors and then propose gathering information through interviewing many people. They suggest finally that they should interview a representative sample of minority group members to find out whether or not they really face the kinds of discrimination presented in the biographies and books of fiction. The teacher then has pupils read a description of how such a poll was actually conducted for Newsweek magazine. Pupils discuss the method used and purposes of the study.

SS 205 can be used to illustrate a lesson in which the teacher is trying to develop skills in evaluating sources of information, the use of an inquiry process in helping pupils identify factors which must be considered in evaluating sources of information, and ways of making use of a wide reading program. The tape can also be used to stimulate a discussion of:

a) the importance of review at the beginning of a period;
b) the classroom atmosphere and factors which contribute to it;
c) types of questions used to elicit different types of thought processes; and
d) types of preparation which a teacher must make when using an inquiry strategy of teaching.

The SS 203 - 205 series of tapes was made in 1966 when the technical quality of photography and sound was not up to the present standards of the Video Tape Project. Tapes were made in a room with very poor acoustics. Consequently, a number of pupils' comments were not recorded clearly enough by the microphones to be included. Many of these sections have been edited out with announcements about what has been omitted. In other places inaudible comments are clarified by what the teacher says in response. Despite the relatively poor sound quality of the original tapes, they are being distributed because of the value of the lessons shown. They provide an excellent example of an important social studies teaching technique, namely, the use of a discussion based upon a wide reading program.

VOLUME SS 206 (54 minutes)

This tape shows parts of four consecutive lessons in an eighth grade class which is studying an experimental course on the American political system. This class was meeting for only half hour periods, parts of which have been omitted. The day previous to the first lesson on this tape, pupils had begun a unit on the executive process. In the first part of this tape, the teacher continues the introductory phase of the unit. The teacher gives two word association tests, one which includes primarily names of presidents, and the other which includes names of a governor and several congressmen. Pupils are to react with the first word which comes to mind. The discussions following each test indicate that pupils recognize the names of presidents, but do not recognize many of the names on the second list. In some cases, they have reacted with words which indicate attitudes about the people on the first list. Pupils discuss the reasons for the differences in their reactions to the two lists and decide that it is because the president is the most important decision maker in our system of government.

In the second lesson, the teacher asks pupils what they think the president does. He lists suggestions on the chalkboard in the form of hypothetical roles of the president. The next day the teacher asks pupils how they might find out whether these lists provide a good definition of what the president does. After pupils have suggested several possibilities, the teacher asks them to look once again at an article on, "A Day in the Life of a President," and to categorize the events listed in that article. After looking at some of the events as a class, pupils work in groups for the rest of the period. In the last lesson, they discuss the ways in which they have categorized these events. They conclude that it is difficult to assign some events to only one category, perhaps because the roles of the president are intertwined. They also decide that they need more information than just an account of one day in the life of one president before they can decide whether or not their list of categories is a good one.

SS 206 can be used to stimulate a discussion of:

a) the purposes of using the word association tests in the first lesson and their effectiveness in achieving these purposes;

b) types of questions which can be used to elicit different types of thought processes; and

c) the role of the teacher in lessons based upon an inquiry strategy of teaching;

d) a reading assignment which involves categorizing data, not just reading for details; and

e) a lesson which stimulates pupils to evaluate the completeness of their data.

VOLUME SS 207 (49 minutes)

This tape shows sequences from three different lessons in an eighth grade civics course which focuses largely upon the structure of government. One of the classes shown illustrates some emphasis upon political behavior. Pupils are studying a unit on the executive branch of government. Part One of the tape shows the class which includes a number of pupils who are being bused into the school from an inner-city area for the first year. The teacher draws upon school activities to help pupils identify factors which they think affect the choice of leaders. Part Two of the tape shows a different teacher working with another class in a lesson which focuses upon the unwritten constitution. The last part of the tape shows the second teacher working with the same class. Pupils are studying the President's cabinet. The sequence on the tape shows the introduction of an oral report, the report itself, and the follow-up discussion.

SS 207 can be used to contrast a structural approach to the teaching of government with the behavioral approach emphasized in the first lesson and in other tapes such as SS 206 and SS 208-215. In addition, the sequence from the first lesson shown on the tape can be used to stimulate a discussion of:

a) using examples close to the lives of pupils as a means of developing generalizations;
b) types of questions asked and kinds of thought elicited by each type;
c) the discussion pattern in the class;
d) the extent of participation and interest in the lesson;
e) the role of the teacher in a lesson based upon an inquiry strategy of teaching; and
f) the extent to which a teacher should strive for complete quiet in a classroom, which includes pupils from an inner-city area, or for a looser and more informal atmosphere in order to encourage pupil participation.

The second lesson can be used to illustrate the way in which a teacher can help pupils identify inconsistencies in definitions. It can also be used to analyze the discussion pattern and types of questions used. Lesson three can be used to focus upon the role of the teacher in a lesson in which pupils give oral reports.

VOLUME SS 208 - 209

These two tapes show an eighth grade class which is studying an experimental course on the American political system. A few days earlier, pupils began a unit on the executive process--a unit which uses several case studies to teach pupils about executive decision making.

SS 208 (52 minutes): This tape shows three consecutive lessons which focus upon Truman's decision to drop the atomic bomb at Hiroshima. The first part of the tape shows a sequence from a symposium presented by a group of pupils on the actual decision which Truman made. Only part of the symposium is included on the tape. After the members of the symposium have presented information on the events leading up to the decision, one member of the group asks the class a series of questions about how different factors affected the decision. At the end of the lesson, pupils add to their existing list of factors which affect decision making.

The second part of the tape shows the beginning of a report which a pupil made on Hiroshima by John Hersey. The teacher later draws upon this report to have pupils compare the actual consequences with the consequences which had been predicted for the dropping of the bomb. During the last part of the period, the teacher gives pupils an exercise which includes a number of statements by people who were either involved in the decision to drop the bomb or who tried to influence that decision. The exercise includes excerpts from people who both agreed and disagreed with Truman's decision. Students are to answer a series of questions which ask them to identify points of agreement and disagreement and possible reasons for the differences, in terms of the bias and competency of the authors. The rest of the tape shows the part of the next lesson in which pupils discuss the exercise.

SS 208 can be used to provoke thought about:
- a) *the pros and cons of using a case study in teaching government;*
- b) *effective ways of using such a case study;*
- c) *the use of additional materials about a case other than those presented in a case study;*
- d) *ways of teaching pupils to evaluate sources of information, in terms of the bias and competency of authors;*
- e) *the possible use of symposia in an eighth grade class; and*
- f) *the role of the teacher in introducing oral presentations and during the follow-up discussion.*

SS 209 (52 minutes): This tape shows parts of three consecutive lessons at the beginning of a case study on Kennedy's decision to quarantine Cuba. In the first lesson, the teacher projects a map showing Cuba in relationship to North and South America and asks pupils to identify reasons why the United States might consider Cuba important. The teacher also reminds pupils of two assignments, one which involves an interview related to the case study, and the other which involves an analysis of the roles of the President, as illustrated by newspaper articles. In the second lesson, pupils listen to Kennedy's speech announcing the Cuba quarantine. Students analyze the speech in terms of Kennedy's purpose and the appeals which he used. Pupils then read Part One of the case study on the quarantine of Cuba. The last part of the tape shows sequences from the third lesson. Pupils discuss the first part of the case study. The teacher projects an overlay map transparency showing the range of jet bombers and different types of ballistic missiles based in Cuba. Pupils also discuss the information which they obtained from interviews with adults about their reactions to the quarantine announcement. The entire lesson is designed to help pupils understand the climate of feeling at the time of the Cuban missile crisis.

SS 209 can be used to stimulate a discussion of:
- a) *the effectiveness of the use of maps in this lesson;*
- b) *ways of introducing case studies in a political science course and the pros and cons of spending this much time in establishing the climate of feeling at the time of the crisis described in the case study;*

- c) *the effectiveness of using a recording of this type in connection with the case study and other ways in which the teacher might have helped pupils analyze the recorded speech;*
- d) *ways in which a case study might be used to develop ideas about political science;*
- e) *the discussion pattern and types of questions used to elicit different thought processes; and*
- f) *the extent of pupil interest and participation.*

VOLUME SS 211 - 215

The eighth grade pupils shown on these tapes attend a suburban school which uses a flexible scheduling program and team teaching. Pupils meet in a large room which also has individual study carrels and library facilities. Movable partitions are used to separate classes or small groups within one large group. In their social studies program, pupils are studying an experimental course on "The American Political System." They are in the middle of a unit on the executive process which uses a number of case studies to teach pupils about executive decision making. They are just beginning work on a case study dealing with Eisenhower's decision to send troops to Little Rock during the school-integration crisis.

SS 211 (46 minutes): The first part of the tape shows part of the joint lab conducted by a team of teachers from different subject matter areas. In this particular lab, a social studies and a science teacher both have announcements to make. Pupils then fill out an attitude scale for their social studies class before they sign out to work on projects in other rooms.

The last part of the tape shows a team of two teachers and a student teacher working with a large group of students on an introduction to the case study on Little Rock. The teachers have chosen to present a socio-drama as a substitute for having pupils read one section of the case study. Pupils are given a worksheet to use for taking notes during the presentation. Afterwards, one of the teachers conducts a brief discussion in which pupils are asked to identify the conflict involved and the parties to the conflict.

SS 211 can be used to illustrate:

- a) *the use of a team of teachers in a flexible scheduling program;*
- b) *the use of an independent lab period during a flexible scheduling program;*
- c) *ways of making a large group presentation within an overall inquiry strategy of teaching;*
- d) *the use of a worksheet to guide the taking of notes during an oral presentation;*
- e) *the way in which a research unit can be adapted to a particular group of students and the purposes of the teachers;*

f) the purposes for which large and small groups should be used within a flexible scheduling program;
g) whether or not the large group in this tape might have been broken up into smaller groups, using the flexible partitions, for the discussion following the presentation by teachers; and
h) the effectiveness of a socio-drama presentation by teachers.

SS 212 (51 minutes): At the beginning of the lesson shown on this tape, two teachers are working with two different groups on different sides of the partition. The tape shows one teacher working with one of the groups. He asks pupils to identify the most important ideas which they have included in their essays. Next, the teacher conducts a discussion based on the worksheet to try to help pupils understand the basic conflict involved in the Little Rock school-integration crisis. Pupils then read an account of the decision which the President made to send paratroopers to Little Rock. Following this, the partitions between the two groups are moved and the two teachers work together to conduct the rest of the lesson with a large group. The two teachers role-play the opposing attorneys in the Plessey vs. Ferguson case. Pupils assume the roles of Supreme Court justices; after the lawyers have finished their presentations, the justices work in groups to write their decisions on the case. At the end of the lesson, a teacher summarizes the actual decision and the facts leading up to the Brown case. Pupils are asked to write their decision on the Brown case before they come to class the next time.

SS 212 can be used to illustrate:
a) the use of team teaching within a flexible scheduling program;
b) the use of flexible partitions in a large room so that a class can be broken down into small groups and then brought together in a large group again within the same class period;
c) role playing by teachers to present the facts of a case; and
d) a situation in which pupils are asked to reach a decision about a legal case before being told what the actual decision was.

The tape can also be used to stimulate a discussion of:
a) the pros and cons of team teaching within a flexible scheduling arrangement in a flexible room;
b) the possible reasons for having teachers role-play rather than having pupils read the background of a judicial case;
c) possible reasons for asking pupils to decide how they would settle a case before they find out what the actual decision was;

d) principles which might be used in deciding when to use large and small groups within a flexible scheduling arrangement; and

e) ways of using large group presentations with curricula designed to emphasize an inquiry teaching strategy.

SS 213 (58 minutes): In the first lesson shown on this tape, pupils are meeting in a small group with only one teacher. At the beginning of the period, the teacher asks pupils around each table to work together to summarize what they heard in the last lesson about the Plessey case. The class then discusses the decision and its importance. Pupils also review the facts of the Brown vs. School Board of Topeka, Kansas case. After discussing this decision, the teacher shifts the focus of the lesson back to the actual Little Rock case. Pupils are to read the next two sections in their case study on Little Rock. The students at each table will role-play a presentation showing how a particular group of people would have reacted to the school board plan for integration. Signs on the tables tell pupils in each group what roles they are to assume. During the rest of the period, the teacher moves around from one group to another, providing help as needed.

The last part of this tape shows another teacher working with a different group of pupils on the same role-playing situations. He gives pupils a little time to conplete their preparation. Microphones failed to pick up much of what pupils said; therefore, only one role-playing episode is included on the tape.

SS 213 can be used to illustrate the use of a room with flexible partitions which can be used to separate classes, the use of buzz groups for purposes of review before an entire class discusses material, and the use of groups to role-play situations. The tape can also be used to stimulate a discussion of:

a) the purposes for using a lengthy case study in a political science course;

b) ways of using such a case study;

c) the role of the teacher during a role-playing planning session and after a role-playing situation;

d) the pros and cons of using such role-playing based upon reading which pupils have done;

e) the effectiveness of the assignment given at the end of the second lesson; and

f) ways in which teachers can use an independent study period in a flexible scheduling program.

SS 214 (60 minutes): In the first lesson shown on this tape, pupils are examining Governor Faubus' decision to call out the National Guard in Little Rock. Pupils discuss the possible effects of the Governor's background and beliefs on his decision. They then try to identify the evidence which Faubus had which led him to call out the Guard, and they evaluate the quality of this evidence. They also discuss the effects of the Governor's action and speeches upon the crisis and upon public opinion around the world. During the last part of the period, the teacher gives pupils data about the recent decision of Wisconsin's governor to call out the National Guard to handle a crisis on the Univeristy campus. Pupils are asked to make comparisons between the situations in Wisconsin and in Arkansas. Pupils then begin work on the last part of their case study on Little Rock. They suggest a number of questions which they should keep in mind as they read.

The last part of this tape shows another member of a team of teachers working with a different group the next day. At the beginning of the period, pupils work in groups on particular questions which the teacher assigns. These questions are taken from the end of the case study and focus attention upon influences affecting the decisions of the President and the Governor in the Little Rock case. Later, each group explains one of the influences which affected the decisions at Little Rock. During the last part of the period, the teacher gives each pupil a dittoed sheet which includes a number of concepts studied in the unit. Pupils work in groups to develop transferable generalizations which they think would hold true for all executives, not just those whom they have studied.

SS 214 can be used to illustrate:

a) one way of using essays which pupils have all written on the same topic;
b) the use of current affairs for comparative purposes while studying a case study;
c) ways of using a case study in a government course;
d) the use of buzz groups to work on different questions rather than the same one; and
e) the role of the teacher during the work of buzz groups.

The tape can also be used to provoke thought about:

a) the usefulness of long case studies in teaching political science;
b) ways of getting pupils to generalize on the basis of data found in case studies;
c) the types of questions which might be asked to promote generalization;
d) ways of helping pupils identify the questions which they should ask as they read material;
e) kinds of evaluation which might be used at the end of a unit; and
f) criteria which might be used to decide when to use small groups and when to work with a large class as a whole.

Viewers can also analyze the lessons in SS 214 to decide where they would place them on a continuum between exposition by the teacher and inquiry by pupils.

SS 215 (52 minutes): The lesson shown on this tape is the introductory lesson in a unit on the legislative system. A team of two teachers work with a large group of students for a two hour period. Students are working in groups around tables. They are playing a modified form of the simulation game, "The Great Game of Democracy." The two hour lesson has been condensed for this tape by omitting repetitious sequences which show different groups doing much the same thing.

SS 215 can be used to illustrate simulation in an eighth grade class, the use of a large room with movable partitions so that teachers can meet large groups or small groups as they desire, and a team teaching situation within a flexible scheduling program. The tape can also be used to stimulate a discussion about:

a) the importance of directions prior to beginning a simulation game;
b) the degree of interest and involvement in simulation games;
c) the pros and cons of using simulation;
d) the importance of follow-up for simulation games;
e) the pros and cons of using small groups rather than an entire class for simulation;
f) the pros and cons of using such a simulation game to introduce a unit and the possible advantages of using it both then and later in the unit in a somewhat different form; and
g) the pros and cons of using team teaching and a flexible scheduling program.

VOLUME SS 216 - 217

The tapes show ninth grade pupils studying an experimental course in economics. At the moment they are working on a unit on, "Farm Problems.". In previous lessons they read newspaper articles describing the plight of some farmers.

SS 216 (32 minutes): This tape shows sequences from two consecutive lessons. In the first, the teacher asked pupils to do an exercise which is aimed at making them wary of generalizing on the basis of too little data. The teacher then provides pupils with statistical data which illustrates trends in farms and farm income. Again, she tries to keep pupils from inserting causal explanations which are not warranted by the statistics. She uses the statistical data to help pupils identify more clearly the problem of low farm income for some farmers. In the second lesson shown on the tape, the teacher begins a review of supply and demand so that pupils can use economic analysis to help them understand the causes of the low farm incomes. The teacher builds demand and supply tables, using pupils' willingness to buy or sell a certain kind of candy at certain prices.

SS 216 can be used to provoke thought about:

a) ways of teaching pupils to be wary of generalizing on the basis of too little data;
b) ways of teaching pupils to interpret statistical data;
c) reasons for asking pupils to graph data;
d) the discussion pattern in the class and the way in which the teacher perceives her role in the discussion;
e) the classroom atmosphere and factors contributing to it; and
f) the effectiveness of the lessons in achieving the teacher's objectives.

SS 217 (49 minutes): This tape shows sequences from three different lessons. Pupils graph supply and demand curves for penicillin, compare the demand for candy and penicillin, and develop the concept of inelasticity of demand. They then apply this concept to an analysis of factors causing a drop in farm income.

SS 217 can be used to provoke thought about types of activities which can be used to teach economic ideas at the ninth grade level. It can also be used to stimulate a discussion of:

a) the use of exercises which ask pupils to apply what they have learned to new data;
b) the classroom atmosphere and factors contributing to that atmosphere; and
c) the role of the teacher in the class.

The tape should prove particularly useful in an undergraduate course in social studies methods.

ANTHROPOLOGY CURRICULUM STUDY PROJECT (ACSP)

OVERVIEW

One series of seven tapes was made which features a class which is using materials prepared by ACSP. The setting is Edison High School, an urban school located in Minneapolis, Minnesota; the teacher is Mr. Roxy J. Pestello. Edison is a large school which draws students from neither the lowest socio-economic class found in a metropolitan area nor from the highest. The class is heterogeneous in composition; however, a large proportion of the students would be considered above average. It is probably fair to say that some of them were suffering from "senioritis" which provided an obvious challenge for both the teacher and the materials.

The tapes available are Volumes SS 661-667 which show the class as it begins its study of a three-week unit on "History as Culture Change: An Overview." Copies of the entire collection of readings, the teaching plans, the charts, artifacts, recordings, films and filmstrips can be obtained from the Macmillan Company. The unit emphasizes changes in culture, particularly those ushered in by the food-producing revolution, as well as physical changes in the human species.

Written, supplementary material included with each tape include the following:

1. Guide for locating important events on the tape.
2. Objectives for the lesson.
3. Background information providing a context for the tape.
4. Suggested uses of the tape including illustrative discussion questions.

The content of the tapes was recorded in May of 1969. The weather was warm, windows were open, traffic on nearby streets was heavy. Thus, although the video quality is good, the audio is not up to current recording standards even though it is believed to be usable.

Unless otherwise indicated in the individual tape descriptions, all of the tapes are considered to be useful in undergraduate courses in either general methods or social studies methods for secondary teachers, in graduate classes concerned with curriculum development in the social studies, and in in-service programs or workshops for secondary school teachers.

The tapes were edited by Dr. Edith West of the University of Minnesota.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES SS 661 - SS 667

Pupils are studying the first lesson in a three-week unit on "History as Culture Change: An Overview," developed by the Anthropology Curriculum Study Project.

SS 661 (52 minutes): The first lesson focuses upon the interpretation of evidence which may be obtained at an archeological site. Pupils are given a site map showing all of the materials found by an archeologist at that site. They are asked to draw inferences about the people who lived at the site and to evaluate the kinds of evidence available. The site happens to be one for a Bushmen group in the Kalahari Desert, but pupils are not told this until a later lesson. The Bushmen are a food-gathering people, not a group which has domesticated plants and animals. The teaching plan calls for one day on the use of the site map. However, this teacher takes an extra day and a half. He modifies the teaching plan by having the pupils work in groups to draw inferences. His decision to take more time on the use of this site map was due in part to the fact that he was going into a new class and did not know the students, in part to past experience with the unit. He probably would have completed the study of the site map in two days if seniors had not been excused halfway through the period for a Mothers' Tea.

After pupils have made as many inferences as they can from the site and have tried to decide which of these inferences they feel most certain about on the basis of the evidence which they have, the teacher will play a sound filmstrip on the Bushmen of the Kalahari Desert, the people who live in the region.

SS 661 can be used to illustrate an inquiry strategy of teaching and the role of the teacher when using such a strategy. It can also be used to provoke thought about:

a) *possible advantages and disadvantages of such a strategy;*
b) *reasons why the teacher diverges somewhat from the lesson plan provided with the unit;*
c) *the role of the teacher during group work;*
d) *the extent of interest and participation in group work as compared to the large class discussion; and*
e) *the place of this lesson on a continuum between inquiry by pupils and exposition by the teacher.*

SS 662 (55 minutes): Before coming to the first lesson on this tape, each pupil was to study the map further and draw additional inferences. This tape shows parts of two consecutive lessons. In the first lesson, pupils continue to draw inferences. The lesson is short because seniors are excused for a Mothers' Tea. Before coming to class for the second lesson, pupils were to arrange their inferences in order, from the one about which they could be most certain, to the one about which they could be least certain. In the second lesson on the tape, pupils talk about the inferences and their degree of certainty about them, and they continue to draw inferences from the map.

SS 662 can be used to provoke thought about an inquiry strategy of teaching and the role of the teacher who is using such a strategy. It can also be used to analyze the kinds of questions which can be asked within an inquiry strategy of teaching to provoke certain kinds of thought. In addition, the tape should prove useful in analyzing pupils' reactions to a kind of teaching strategy to which they are not accustomed, as well as the extent to which they are able to draw inferences on their own.

SS 663 (55 minutes): This tape shows parts of two lessons. In the first, pupils view a sound filmstrip on the Bushmen of the Kalahari Desert. (Only part of the filmstrip is included on the tape.) The filmstrip describes how the Bushmen live in the area in which the archeological site is located. Pupils compare what they have been able to infer from the map with what they learn about how the Bushmen use the site. In the second lesson on the tape, pupils examine two stones, decide that they were probably tools and speculate about which was produced first and why man did not produce more tools sooner.

SS 663 should provoke thought about:

- a) *the use of sound filmstrips in a class;*
- b) *an inquiry strategy of teaching and the role of the teacher who is using such a strategy;*
- c) *kinds of questions which can be asked to provoke different kinds of thought;*
- d) *the discussion pattern in the class;*
- e) *the use of artifacts in a social studies class and reasons for using these artifacts; and*
- f) *possible reasons for the assignment given at the end of the lesson.*

SS 664 (46 minutes): In the lesson on this tape, pupils look at changes in the skulls of men from the earliest times to the present. They compare these changes with what they have found out in earlier lessons about changes in tools, and they try to decide whether or not there is a relationship between the two. In the last part of the lesson, the teacher reads aloud a selection on evolution and pupils talk about evolutionary processes which may be taking place today.

SS 664 can be used to provoke thought about:

a) *the reason for including the different activities in the lesson;*
b) *the role of the teacher in an inquiry strategy of teaching;*
c) *the pros and cons of an inquiry strategy of teaching;*
d) *the types of questions which can be used to stimulate different types of thought; and*
e) *the pros and cons of reading aloud a selection rather than having pupils read it silently.*

SS 665 (48 minutes): In the first lesson shown on this tape, students are discussing part of an article which they read on "Man Before History." Only part of this lesson is shown--that part which involves a discussion of a cave painting. The teacher also uses an article to help pupils understand the length of time which has elapsed since the period which they are studying. In the second lesson on the tape, pupils are using data from a brief reading on Jarmo, from a drawing of what Jarmo might have looked like, from pictures of artifacts found at Jarmo, and from a cast of a figurine found at Jarmo. They draw inferences about the way in which people in Jarmo lived, about how their life differed from the life of hunters-gatherers, and about what may have brought about the change to farming.

SS 665 can be used to provoke thought about:

a) *inquiry strategies and the role of the teacher who uses such a strategy;*
b) *kinds of questions which can be used to stimulate different kinds of thought;*
c) *the usefulness of analogies in social studies;*
d) *the usefulness of the article used by the teacher to develop a sense of time;*
e) *possible reasons for reading aloud articles rather than having pupils read them silently;*
f) *the degree to which pupils are able to draw inferences and speculate about causes of the change to farming; and*
g) *pupils' reactions to the inquiry strategy used in the lesson and possible reasons for their reactions.*

SS 666 (49 minutes): In the lesson shown on this tape, pupils compare the way in which the people of Jarmo lived with the way in which the Bushmen lived. The focus of the lesson then shifts to the interrelatedness of different aspects of culture and the way in which this interrelatedness is used by anthropologists as they draw inferences about ancient man from the few remaining artifacts.

SS 666 can be used to provoke thought about:

a) the effectiveness of the different activities used in the lesson;
b) the degree to which pupils are able to draw inferences and speculate about possible differences in societies;
c) the degree to which pupils are able to identify interrelationships among different culture traits;
d) the use of an inquiry strategy of teaching and the role of the teacher using such a strategy; and
e) the types of questions which can be used to elicit different types of thought.

SS 667 (54 minutes): In the first lesson shown on this tape, pupils examine the translations of Sumerian texts found on clay tablets. They draw inferences about the people of Sumer on the basis of these translations. They then make brief comparisons between the people of Sumer and the people of Jarmo and the Bushmen. The second lesson shown on the tape comes three days later, after pupils have turned to an examination of peasant societies. They have watched a filmstrip on a Middle Eastern village and have discussed the outlook of peasants. Before coming to class, pupils read an article on "The Peasant and Modern Civilization," which describes changes in the village of Chan Kom in Yucatan. Pupils discuss this article and the question of whether or not one society should impose its culture upon another. The teacher faces a number of problems with this class, particularly in the last lesson when approximately half of the seniors are gone at the beginning of the period because of a school activity, and another group leaves before the period ends for another school activity. Furthermore, the temperature was approaching 100 degrees outside and the room was extremely hot. Finally, this lesson comes only three days before the seniors are excused from school.

SS 667 can be used to provoke thought about:

a) the effectiveness of the activities used in the lesson;
b) an inquiry strategy of teaching and the role of the teacher in such a strategy;
c) the discussion pattern in the class and possible reasons for the pattern;
d) types of questions which can be used to stimulate different kinds of thought;
e) ways of handling value statements in class;
f) problems facing the teachers of seniors at the end of the school year; and
g) the role of the teacher during a study period.

HIGH SCHOOL GEOGRAPHY PROJECT (HSGP)

OVERVIEW

There are twenty tapes featuring classes working with materials developed by the High School Geography Project:

Volume(s)	Subject	Grade	Teacher
SS 218-221	Geography of Cities	9	Mr. Philip V. Cognetta
SS 619-624	Manufacturing and Agriculture	9	Sister Hermana
SS 625-633	Manufacturing and Agriculture	11	Mr. Bruce Tipple

The series, SS 218-221, was made at Sheridan Junior High in Minneapolis, Minnesota, in October of 1969. The class is heterogeneous in composition. The content for these tapes was selected and edited by the staff of the High School Geography Project. (The HSGP also prepared SS 812, which is included in the listing of topical tapes.) They have also prepared the following written, supplementary materials to accompany each tape:

1. Synopsis for the scenes in the tape.
2. Class assignment for the tape.
3. Questions for discussion of the tape.
4. Suggestions pertaining to the use of the tape and background information on the class.

The series, SS 619-624, was made at Regina High School in Minneapolis, Minnesota, in November of 1968. Although the tapes deal with the same unit, sequences shift between two classes, each of which is heterogeneous in composition. Regina is a Catholic girl's school which draws its students from the metropolitan area; the general ability of its student body is higher than the national average.

Volumes SS 625-633 were made in Marshall-University High School during the winter of 1968, at a time when it was newly organized as a school with a student population consisting of pupils from the local area, pupils bused in from an inner-city area, and pupils who formerly attended a separate University High School which drew upon the entire metropolitan area and had served as the University of Minnesota Laboratory School. Students in the class represent a wide range of abilities, the distribution being bi-modal. Due to poor acoustical conditions in the school, the audio quality of these tapes is not as good as that of others in this category; however, it is believed that it is adequate to ensure profitable use of the tapes.

Both of the series, SS 619-624 and SS 625-633, were edited by Dr. Edith West of the University of Minnesota. Written supplementary materials to accompany these tapes include the following:

1. Guide for locating important events on the tape.
2. Objectives for the lesson.
3. Background information providing a context for the tape.
4. Suggested uses of the tape including illustrative questions for discussion.

Unless otherwise noted, all of the tapes are deemed useful in an undergraduate course in social studies methods, in graduate courses dealing with instructional procedure or curriculum development, and in in-service programs and workshops designed for social studies teachers, especially those wishing to use the HSGP materials.

Materials used by the classes shown in the tapes can be obtained from the High School Geography Project of the Association of American Geographers.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES SS 218 - SS 221

This series of tapes shows ninth grade students working with Unit I "Geography of Cities," from the HSGP course, Geography in an Urban Age.

SS 218 (59 minutes): This tape shows students working with the first activity in Unit I, "City Location and Growth," which centers on student examination of hypothetical maps showing several alternative sites for the founding of cities in five different time periods, 1800, 1830, 1860, 1890, and 1910. In each of the time periods students must consider, given the information on the hypothetical maps, factors such as transportation, raw material sources, health and protection that would make any one of the available sites the most desirable. Students are then asked, in a homework assignment, to plan the optimum site for a suburb in the 1970's, taking into account those factors they have dealt with in other time periods, as well as new influences on city location in the 1970's.

The inquiry teaching strategy for the activity utilizes small group and classroom discussions about each of the diagrams, with the teacher posing basic questions about each of the diagrams and encouraging students to pick and defend sites for settlement in each time period.

SS 219 (60 minutes): This tape focuses on the first half of the "New Orleans" activity. Students are introduced to New Orleans through the use of topographic maps, aerial photographs, and stereoviewers. They determine the site of New Orleans and the reasons for its founding. Students then proceed to examine the aerial photographs in order to identify and account for certain land use features in the city. Next, they discuss the location of a major bridge across the Mississippi and try to assess why it was built where it was and its impact on the surrounding area. There is also a discussion of the location of the Central Business District of the city.

SS 220 (57 minutes): This tape shows the second part of Activity 2, "New Orleans." Students work with topographic maps, aerial photographs and stereoviewers to examine the socio-economic characteristics of three neighborhoods in New Orleans. Predictions are made about income levels, educational attainment, housing value and racial composition of the three neighborhoods. After the students form initial hypotheses about the neighborhoods, they are directed to census data to verify or reject their assumptions. The strategy of the activity is such that students are correct in some of their generalizations but incorrect in others. A discussion follows which tries to clarify why the students were correct or incorrect.

The activity in SS 220 uses a variety of media and demonstrates an inquiry technique based on the stating of a problem, formulating of hypotheses, gathering pertinent data and accepting or rejecting the hypotheses, so it should prove useful in a number of ways.

SS 221 (59 minutes): This tape shows excerpts from Activity 4, "Portsville," in Unit I. The activity is a simulation exercise in which students build a hypothetical U.S. city as they think it would have developed in the 1880's. Construction of the city is carried out on a plastic Modulex board using tiny color-coded building pieces to represent different land uses. The color-coded building pieces attach to the Modulex board so that students can arrange land-use patterns in any combination they they desire.

Students use historical readings and photographs about the city to help them reconstruct the city as they think it would have appeared in three time periods; 1850-1880, 1880-1890 and 1890-1900. In each of the time periods, questions relating to land use are raised, e.g. where was the city founded and why, where would different types of land use be located, and what land uses are interrelated. Small groups of students are asked to build the city and then defend the way they have constructed the city based on the optimum use of land.

SS 221 shows students working in small groups, handling manipulative model materials, and defending their positions to others in the class. The teacher roles of managing small groups, questioning student decisions, and carrying on a class critique of the completed cities are also demonstrated.

VOLUMES SS 619 - SS 624

This series of tapes features a class of ninth grade girls who are studying an experimental course, Geography in an Urban Age. It begins when the class is on the first lesson in a unit on "Manufacturing and Agriculture."

SS 619 (51 minutes): After asking pupils to list some of the kinds of industries which they already know, the teacher asks them to read four paragraphs, each describing a different industry. They are then to look at six maps in their workbooks and decide which map fits the industry described in each paragraph. Students at each table are permitted to work together on this task. During the last part of the period, students present their reasons for their selections. The teacher ends the lesson by giving an assignment.

SS 619 can be used to illustrate:

a) *an inquiry approach to the teaching of geography and, more specifically, a way of having pupils apply what they already know to the identification of a pattern on a map;*

b) *a discussion pattern in which the teacher introduces a question and then lets students carry on the discussion themselves;*

c) *the role of the teacher during a study period when a teacher is using an inquiry strategy of teaching; and*

d) *a sample lesson in the new curriculum material prepared by the High School Geography Project.*

SS 620 (58 minutes): The major portion of this tape shows a class working on Lesson Two in the second unit on "Manufacturing and Agriculture." During the first part of the lesson, students mention all the things which they have thought of which they would have to do without if they had to depend upon hand and animal power to produce things. Then the teacher asks students to look at two flow charts in their unit booklets. These charts show the materials which a factory uses and sells to both the immediate area and other places. The teacher gives pupils at each table a blank transparency. Each group is to select some manufactured product and draw a flow chart showing the materials which a factory producing it would use from the local area and those which it would have to bring in from other places. Students are still working on this project when the teacher interrupts them at the end of the lesson, which is a short one because of the flexible scheduling arrangement used in the school. The teacher asks students to complete their flow charts during their independent study time before coming to class two days later. They are also to consider how the community helps manufacturing and how manufacturing helps the community.

The last part of the tape shows the teacher working on part of the same lesson with another class. However, she holds a class discussion of the effects of factories upon communities and communities upon factories, before students examine the flow charts and before she asks them to make their own flow charts.

SS 620 may be used to illustrate:

- *a) the way in which an activity asking pupils to imagine certain things can be used to develop a generalization;*
- *b) a discussion pattern in which students who disagree with each other react directly to other students rather than waiting to be called upon by the teacher;*
- *c) a different discussion pattern in which the teacher is asking a series of questions;*
- *d) the use of amall groups, each of which is to work on the same kind of assignment;*
- *e) the role of a teacher during group work; and*
- *f) ways of adapting a lesson to different classes.*

This tape can also be used to stimulate discussion of effective ways of helping pupils learn to interpret flow charts, of reasons for having pupils make charts, and of ways of making effective assignments.

SS 621 (61 minutes): This tape shows two consecutive lessons; the first shows the class listening to a speaker from a local company which uses flax to produce linseed oil and other products. The speaker describes the source of the materials which the company uses, the way in which it modifies these materials, and the kinds of products which it produces. He locates his company's competitors and the major consumers of his company's products. He also answers questions from the teacher and students.

The last part of the tape shows two different classes the next day. Earlier in the week, students examined sample flow charts in their unit booklets. The students at each table identified a product which they might like to produce and developed a flow chart for their factory. In this lesson, students explain their charts to the rest of the class. Before doing so in the first class, there is a brief discussion of the speech given the previous day.

SS 621 illustrates: the use of community resources in a geography class; the use of drawing activities to develop geographic ideas; and ways of having pupils present group work through visual media. The tape can also be used to stimulate a discussion of:

a) effective ways of using outside speakers in a class;
b) ways of introducing reports;
c) the role of the teacher during and after reports;
d) the effectiveness of the drawing activity in achieving stated objectives; and
e) the discussion pattern used in the class.

SS 622 (47 minutes): The focus in the two lessons on this tape shifts to factors which affect the location of factories. The teacher begins the first lesson by reviewing highlights in the unit up to this point. She tells the class that the girls at each table will now organize as the officers of a metal fabricating company. Their job is to decide in which of the 25 largest cities in the country they will locate a new plant. The teacher asks the class to identify the 25 largest cities. She then tells them to begin working as groups. To begin with, the students are to read the role descriptions of officers in their unit booklets. They are then to decide which girl will assume each role. Once they have decided upon their roles, each student is to analyze in detail the maps or statistical data provided for the official whose role she is assuming. The officials of each company will then try to decide where to locate their plant. The rest of this lesson and the second lesson on the tape shows the class working in groups, trying to arrive at their decisions.

SS 622 can be used to illustrate: (a) the use of a summary of what has been done in a unit before starting another major activity in the unit; (b) the use of group work in which students role-play certain positions described for them in written form; (c) the use of group work in which each group is working on the same task rather than on separate tasks; (d) the role of the teacher in setting up group work and during group work; and (e) the way in which a teacher modifies instructions to groups when they meet a second day, in the light of what happened in the previous lesson. The tape can also be used to stimulate a discussion of:

a) additional modifications of instructions which might have facilitated the group work;
b) aspects of this type of work which might be done as homework and those aspects which should be done in class in the groups;
c) possible advantages and disadvantages of using group work for the purposes illustrated in this lesson;
d) the pros and cons of having students identify the 25 largest cities in the country; and
e) the discussion pattern and types of questions used to elicit certain types of thought processes.

Those viewing SS 622 can also be asked to identify difficulties which students have with the material and possible general class activities which might have helped them make their decisions. This tape will prove most useful if it is used in combination with tape SS 623, which shows a continuation of the group planning and the presentation of the locational decisions by the "presidents" of the companies.

SS 623 (55 minutes): This tape shows the last two lessons related to locating the metal fabricating plant. During the first period, all the students who play the role of a particular officer meet in a convention to discuss their common problems in locating a new plant. The officers then return to their own management boards where they are to make their final decisions. The second lesson included on the tape shows selected sequences from two different classes. The presidents of the companies explain the decisions made by their officers.

SS 623 can be used to stimulate a discussion of:
a) the degree of interest shown by students in such role-playing lessons;
b) the extent to which students actually assume the roles they are supposed to assume;
c) the role of the teacher during group work in which students are involved in role-playing of this kind;
d) possible directions which might be given groups to facilitate their arriving at some kind of consensus;
e) possible reasons for the various activities involved in the entire role-playing episode;
f) the possible advantages of group work in which all groups are working on the same task;
g) ways of making use of group findings when all groups have worked on the same task; and
h) possible objectives which these lessons may help achieve other than those which are listed for the lesson.

SS 624 (57 minutes): The two lessons shown on this tape are the concluding lessons in the section on manufacturing. The first part of the tape shows the teacher giving students help on an assignment in which each pair of students is to draw a diagram to illustrate the importance of different factors in terms of the location of a specific industry. This assignment was given in a previous lesson, but students have questions about it now that they have read material in their unit booklet and have studied an illustrative diagram. The last part of the tape shows another class the following day when students explain the diagrams which they have constructed. Other members of the class ask questions and make suggestions for revisions of these diagrams. During the course of both lessons, the class discusses many factors which affect the location of different industries.

SS 624 can be used to stimulate a discussion of:

- *a) possible reasons for having pupils make diagrams;*
- *b) ways of clarifying an assignment after pupils have done some initial reading;*
- *c) the effectiveness of this activity as a culminating activity for the section in the unit;*
- *d) the role of the teacher in introducing illustrated oral reports, during such reports, and following the reports;*
- *e) the reasons for having pupils discuss drawing projects in class;*
- *f) possible ways of having students check on their guesses when they make diagrams of locational pulls for different industries; and*
- *g) interaction among pupils and the teacher.*

VOLUMES SS 625 - SS 633

The eleventh grade students shown in this series are studying an experimental course, Geography in an Urban Age, developed by the High School Project. They are just beginning the section dealing with agriculture in Unit 2 on "Manufacturing and Agriculture."

SS 625 (38 minutes): In this tape pupils use two map patterns, one of hunger in the world and one of population, to identify places in which hunger and high population are associated. The teacher then asks the class to hypothesize about other factors which may be found in areas of high population and poor diets. He then asks students to examine their maps once more to find out whether areas of dense population are the only areas with a hunger problem. The class also makes suggestions about possible reasons why the rate of agricultural change may be slow in some of these areas. During the last part of the period, students divide into buzz groups to discuss a series of questions related to the problem of hunger. The teacher moves around the class as the groups work. Students will check their hypotheses about factors associated with high population and hunger during later lessons in the unit.

SS 625 illustrates: a lesson in which pupils use two different map patterns to identify places in which two factors are associated; a lesson in which a teacher asks students to hypothesize about other factors associated with those they have identified; and, the way in which a teacher accepts suggestions during this stage of inquiry, probing only to stimulate additional suggestions. The tape can also be used to stimulate a discussion of:

a) possible ways of dividing a class into buzz groups;
b) efficient ways of giving directions to buzz groups;
c) the role of the teacher during the work of buzz groups;
d) the pros and cons of using buzz groups to discuss common questions;
e) the effectiveness of these particular buzz groups in carrying out the task given them; and
f) the types of questions which can be used to elicit different types of thought processes.

SS 626 (51 minutes): At the beginning of this lesson, the teacher reminds pupils of reports which they are to present in several days. He reviews the major factors which they are to consider in each of their group reports. He then returns to the questions which pupils discussed in buzz groups at the end of the hour the day before. Pupils analyze the relationships between hunger and distribution of farmland. They suggest factors which make it possible for some places with very little farmland to have plenty to eat while other places with a great deal of farmland have hunger. As pupils analyze the factors which are hampering efforts to increase output, they conclude that there is a vicious cycle which makes it difficult to improve living levels.

SS 626 can be used to stimulate a discussion of:

a) types of questions which can be asked to elicit certain types of thought processes;
b) the discussion pattern in the class;
c) principles which might be used to decide when a teacher should take time to probe and analyze a pupil's comments in considerable detail;
d) where this lesson might be placed on a continuum between exposition by the teacher and inquiry by pupils;
e) the role of the teacher who is using an inquiry strategy of teaching; and
f) possible ways of following up a lesson of this type.

SS 627 (44 minutes): When this tape begins, pupils have already summarized the previous day's lesson and have begun to use a map and statistical data to identify areas in which hunger coincides with a rapidly-growing population. As the tape starts, pupils define the words "rapidly-growing." They then continue to use maps to identify areas of hunger and a rapidly-growing population as defined. Pupils suggest other factors which might be associated with both hunger and a rapidly-growing population. After one pupil refers to "good" and "bad" conditions, the teacher raises questions about how such terms can be defined. He tries to get pupils to avoid value terms and to identify criteria used in making such judgments of this type.

SS 627 can be used to stimulate a discussion of:

a) the degree to which senior high school students can note relationships between different map patterns of an area;
b) the importance of having pupils define terms carefully;
c) ways of helping pupils distinguish between value terms and objective criteria in making comparisons about living conditions;
d) the role of the teacher in a lesson designed to promote student inquiry;
e) types of questions which can be used to elicit different thought processes; and
f) the extent of pupil interest and participation.

SS 628 (54 minutes): This taps shows parts of three consecutive lessons in which pupils look at the distribution of agricultural products and factors affecting the production of different products. In the first lesson, the class dwells briefly upon difficulties involved in solving the problem of hunger. Pupils then work in groups upon the presentations which they will give on different agricultural products. The teacher moves around the class giving help as needed. The second part of the tape shows two sequences from the next day's lesson. In the first, the teacher tells pupils what to look for during the oral presentations. In the second, the class discusses several points made by the group which has been talking about corn. The third part of the tape shows two more sequences the following day. In one, pupils are discussing mechanization as a follow-up to a report on wheat. In the other, the teacher conducts a summarizing discussion on the factors which seem to be necessary for agricultural production.

SS 628 can be used to provoke thought about:

- *a) the role of the teacher in group work when pupils are preparing group reports;*
- *b) the pros and cons of modifying the Teacher's Guide as this teacher has done;*
- *c) effective ways of introducing oral presentations;*
- *d) effective ways of using maps to check pupils' ideas;*
- *e) types of questions which can be used to stimulate certain types of thought processes;*
- *f) the extent to which a teacher who is attempting to use the inquiry process might probe more deeply upon comments made by pupils; and*
- *g) the extent to which these lessons help achieve the objectives identified for them.*

SS 629 (49 minutes): In the lesson on this tape, the teacher reviews what pupils have learned from group reports by having them point out places on a world map which would include most agricultural cropland. He then has pupils check their ideas against a map of croplands in their unit booklet. Pupils discuss the relationship between population distribution and cropland and between the distribution of different types of agricultural products. The teacher then asks pupils to list once again the factors which they identified the day before as those necessary for agriculture. However, because a pupil had objected to the words "necessary for," they list "factors affecting" agriculture. Students then categorize these factors and compare those affecting agriculture with those affecting manufacturing.

SS 629 should prove particularly helpful in an undergraduate course in social studies methods. It can be used to stimulate a discussion of:

- *a) ways of making effective use of a map in locating places;*
- *b) ways of handling remarks which imply cause-effect relationships between factors which are associated;*
- *c) ways of having pupils test the accuracy of statements which they make about factors which are associated with each other;*
- *d) ways of handling differences of opinion which arise among class members;*
- *e) ways of handling statements which involve logical fallacies;*
- *f) principles which a teacher might use in deciding when to probe a particular comment in considerable detail and when to gloss over it in order to avoid interrupting the flow of a discussion;*

- *g) the types of questions used to elicit different types of thought processes;*
- *h) ways of handling pupil comments to the effect that a question which the teacher has asked is "dumb;"*
- *i) possible reasons for having pupils categorize items on a list;*
- *j) the pros and cons of using map overlays rather than maps on different pages of a booklet;*
- *k) the extent of pupil interest and participation; and*
- *ℓ) the place of this lesson on a continuum between exposition by the teacher and inquiry by the students.*

SS 630 (52 minutes): At the beginning of the first lesson shown on this tape, the teacher summarizes three important questions raised in the last lesson. Pupils explore them a little further before the teacher asks them to keep these questions in mind as they listen to a tape recording of an inverview with a midwestern farmer. The teacher stops the tape at times to ask pupils to write answers to questions he raises. They predict how the farmer will handle certain problems or explain why he has taken a particular stand.

The last part of the tape shows the lesson the next day. Pupils talk about the questions which the teacher raised as the tape was played and then listens to the rest of the tape. One pupil challenges the authenticity of the interview. The teacher helps pupils understand why those who developed the course have produced a tape which is really based upon a series of interviews rather than just one. After pupils have talked about some of the ideas in the tape, the teacher returns once more to the question raised earlier: which of the two groups, farmers or manufacturers, can exercise a greater degree of personal preference in selecting a location for their operation?

SS 630 can be used to stimulate a discussion of:
- *a) ways of relating a lesson to previous learning;*
- *b) ways of introducing a tape recording;*
- *c) the pros and cons of having pupils listen to a tape recording of an interview when they have a written transcript of the interview;*
- *d) effective ways of using a tape recording in a class;*
- *e) ways of handling a student's comments which have not been foreseen either by the teacher or by those who produced the curriculum material;*
- *f) principles which a teacher might follow in deciding when to analyze a pupil's comment in considerable detail;*
- *g) ways of rewording questions to clarify some of the points about which pupils are arguing.*

h) the role of the teacher in a discussion;
i) the permissive atmosphere permitted in this class; and
j) the place of these lessons on a continuum between exposition by the teacher and inquiry by pupils.

SS 631 (50 minutes): This tape shows two consecutive lessons in which students play "The Game of Farming." Yesterday they began the game and assumed the roles of farmers for the year 1880 in a settlement in western Kansas. In the first lesson shown on this tape, they play the next rounds for the years 1881 and 1882. The second part of the tape shows the same class the following day. The teacher begins by having pupils summarize the factors which affected their success as farmers in the first farming game which they completed the day before. Pupils then listen to a student read aloud a newscast summarizing the events between the years 1882 and 1919 which will mark the beginning of the second game. The teacher gives directions for the second game and asks pupils to read the charts and other material in their unit booklets before they begin. The class begins the round on 1919 but does not complete it until the next day.

SS 631 may be used to illustrate the use of "The Game of Farming," part of the HSGP unit on "Manufacturing and Agriculture." It should prove valuable in stimulating discussion of:

a) the possible advantages and disadvantages of using simulation games;
b) reasons for having such an extended simulation game covering so many different years;
c) the role of the teacher during a simulation game;
d) the extent of pupil participation and interest during the game; and
e) possible ways of following up the game to help pupils gain as much as possible from it.

SS 632 (51 minutes): In the first lesson shown on this tape, students find out how well they did as farmers in 1919 and go on to play the rest of the game for 1920 and 1921. The second part of this tape shows the class the next day when pupils play the last game for 1933, 1934 and 1935. The two lessons have been condensed for the purposes of this tape.

SS 632 may be used for the same purposes as those listed for SS 631.

SS 633 (54 minutes): The two lessons shown on this tape illustrate two different ways in which the teacher attempts to have students analyze what happened when they played "The Game of Farming." Yesterday, students divided into groups to try to answer certain questions. Each group was to appoint a spokesman. At the beginning of the first lesson on this tape, the teacher asks the spokesmen to form a panel to discuss the questions. Members of the class raise other questions and suggest additional things which they have learned from playing the game.

The last part of the tape shows another lesson in which the teacher uses land-use maps which show the decisions made by members of the class while playing "The Game of Farming" for the years 1881 and 1921. Pupils compare the maps and try to decide what factors brought about the changes shown on the second map.

SS 633 can be used to illustrate two different ways of helping pupils generalize on the basis of simulation games which they have played. The tape can be used to provoke thought about:

a) the comparative effectiveness of both follow-up procedures;
b) whether or not both procedures are needed to achieve the objectives for the simulation game; and
c) the effectiveness of using buzz group spokesmen in an unrehearsed panel discussion.

If this tape is used after viewers have seen the pupils playing "The Game of Farming," the tape should prove useful in stimulating a discussion of the degree of interest shown by pupils in the simulation game as compared to the follow-up procedures.

SS 633 should prove valuable in an undergraduate course in social studies methods, in a graduate course focused upon instructional procedures, and an in-service program or workshop for social studies teachers. It should probably not be used unless viewers have seen SS 631 or SS 632 and preferably both.

MINNESOTA PROJECT SOCIAL STUDIES (MPSS)
SENIOR HIGH

OVERVIEW

Three series of tapes which feature senior high school materials developed by Minnesota Project Social Studies are available:

Volume(s)	Subject	Grade	Teacher
SS 634-639	Civil War and Reconstruction	10	Mr. Donald R. Wentworth
SS 640-645	Area Studies -- Russia and China	11	Mrs. Kathleen Murphy
SS 647-652	War and Peace	12	Mr. Craig Kissock

These eighteen tapes were made at Marshall-University High School, Minneapolis, in December 1968. At that time it was a newly organized school with a student population consisting of pupils from the local area, pupils bused in from an inner-city area, and pupils who formerly attended a separate University High School which drew upon the entire metropolitan area and had served as the University of Minnesota Laboratory School. Classes are heterogeneous in composition but generally above the national average.

Due to generally poor acoustical conditions in the school, the audio quality of these tapes is not as good as that of others; however, it is judged to be adequate for profitable use.

Although the tapes are shown as part of a series (which means they show the same class, unit and teacher) any of them may be used individually. Each tape is accompanied by the following supplementary materials:

1. Guide for locating important events on the tape.
2. Objectives for the lesson.
3. Background information providing a context for the tape.
4. Suggested uses of the tape, including illustrative discussion questions.

Unless otherwise indicated in the descriptions of the individual tapes, all are considered to be useful in undergraduate courses in either general methods or social studies methods for secondary school teachers, in graduate classes concerned with curriculum development in the social studies, in in-service programs or workshops for secondary school teachers, and for teachers faced with the task of developing an articulated K through 12 social studies curriculum.

The materials being used by the classes may be obtained from the Green Printing Company, Minneapolis, Minnesota. Further revisions are in progress; and information regarding their availability will be known to the Green Printing Company or through Minnesota Project Social Studies, University of Minnesota. There may be some discrepancies between the preliminary, unrevised materials used by the teachers shown in the tapes and the published versions; however, this should not present a serious problem.

The tapes were planned and edited by Dr. Edith West of the University of Minnesota, Director of Minnesota Project Social Studies.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES SS 634 - SS 639

This series of tapes shows a class which is just beginning its study of a unit on the "Civil War and Reconstruction."

> SS 634 (54 minutes): Two consecutive lessons are shown on this tape; the teacher begins the first lesson by asking pupils why a current best-selling record is so popular. The song deals with Lincoln, John Kennedy, Martin Luther King, and Robert Kennedy. Pupils identify ways in which these persons are related, the feelings which people now have about them, and the reasons why they seem almost more popular today than when they were alive. Pupils discuss reasons why those concerned with the civil rights movement today might be interested in the slavery problem of over a hundred years ago. They identify the kinds of sources which they might use in investigating slavery in the United States. For the rest of the period, they work on an exercise based upon differing interpretations of slavery.
>
> The second lesson focuses upon the impact of slavery upon human beings. The teacher uses a slide of a slave ship and a reading about a young African who was brought to this country on a slave ship. Pupils discuss ways in which capture, transportation to the coast and then on a slave ship, and induction into slavery in the new world would affect the African. They also discuss the way in which the culture of the African would need to change in order for the African to survive in slavery.

SS 634 can be used to illustrate the use of a popular recording, slides and an oral reading in developing social science generalizations. The tape can also be used to stimulate a discussion of:

a) the purposes of the initiatory phase of a unit and the effectiveness of this lesson in achieving such purposes;

b) ways of using pupils' personal background to develop ideas in the social studies;
c) ways of developing aspects of critical thought related to the evaluation of sources of information;
d) effective ways of using an oral reading in class;
e) the effectiveness of these lessons in achieving the specific goals identified by the teacher; and
f) principles to use in adapting a resource unit for use with a specific class.

SS 634 can also be used to analyze the discussion pattern and the types of questions used to elicit different types of thought processes. If used with tapes SS 635, SS 636, and SS 638, this tape might be used in a curriculum development class to analyze the flow of activities designed to set the stage for an analysis of an historical interpretation.

SS 635 (40 minutes): At the beginning of the lesson, the teacher asks pupils to summarize conclusions which they reached on the previous day about the relationship between the Civil War and the present day civil rights struggle. Pupils also summarize some of the sources which they identified for use in finding out about what slavery was like. The tape omits part of the lesson in which pupils summarize differences between indentured servants and slaves and between the culture of the Africans who arrived in this country and their white masters. The tape begins again as the teacher has pupils work in buzz groups to draw upon what they have learned in other classes and from their own experiences to answer two questions: how does one learn how to behave in our society, and how does one develop his self-concept. After working in buzz groups, pupils present their ideas in a general class discussion. The teacher then projects a slide showing an advertisement for a sale of slaves. He asks pupils what conclusions they think they can draw about slave life and slave families from just this advertisement. He then asks them to consider for the next day what they have said about socialization and the development of a self-concept in relationship to the conditions of slavery.

SS 635 can be used to initiate a discussion of:
a) the use of a summary at the beginning of a lesson;
b) the purposes of having pupils work in buzz groups;
c) the purposes of having pupils consider the process of socialization and the development of a self-concept when studying slavery;
d) the effective use of slides in a history class;
e) the purposes for using a slide showing an announcement of a slave sale;

- *f) the kinds of questions used and the types of thought processes elicited by them; and*
- *g) principles to be used in adapting a resource unit to a specific class.*

If used with tapes SS 634, SS 636 and SS 638, SS 635 can be used to analyze the flow of activities designed to set the stage for an analysis of an historical interpretation.

SS 636 (48 minutes): The lesson shown on this tape is one of the lessons which helps set the stage for an analysis of Elkin's theory of slavery. As the lesson begins, pupils summarize their ideas about socialization and the development of a self-concept. The teacher projects a slide showing an advertisement for a sale of slaves which pupils were looking at at the end of the period the day before. Pupils use the data from this advertisement and others to identify some of the conditions of slavery, including the way in which young children were separated from their parents. Pupils identify some of the values of American society and try to figure out how white people could have justified their attitudes toward and their treatment of slaves. Pupils then work individually to set up hypotheses about the ways in which slave conditions would affect the socialization of a young slave and the development of his self-concept. During the last part of the period, the teacher conducts a discussion on the conditions of slavery as indicated by the different sources which they have been reading. Pupils notice differences in interpretation and discuss possible reasons for these differences, partly in terms of the bias of the authors.

SS 636 can be used to stimulate a discussion of:

- *a) the importance of the flow of ideas from one lesson to another and within a lesson;*
- *b) reasons for using a summary at the beginning of a lesson;*
- *c) the possible objectives for using certain activities;*
- *d) ways of providing a background for asking pupils to hypothesize about historical interpretations;*
- *e) a possible follow-up lesson after the development of such hypotheses;*
- *f) ways of using a variety of sources of information both to develop ideas about slavery and to develop criteria for evaluating sources of information; and*
- *g) the use of social science concepts in teaching history.*

If used with tapes SS 634, SS 635, and SS 638, this tape should help viewers analyze the way in which a teacher fits a series of lessons together to provide the background for an analysis of an historical interpretation.

SS 637 (50 minutes): In the lesson shown on this tape, the teacher asks pupils to apply what they have learned in earlier lessons about bias and competency of witnesses to the materials which they have used on slavery. He begins by asking pupils to identify the one source which they thought was the best source on slavery and to give reasons for their choices. He also suggests an imaginary incident which might happen to the pupils at a party and asks pupils to suggest the characteristics of the witnesses whom they would want to have testify about this incident. Pupils then return to the authors of the accounts which they have read and summarize their conclusions about the bias and competency of these authors.

SS 637 can be used to stimulate a discussion of:

a) *ways of developing skill in evaluating sources of information;*

b) *the completeness of questions raised about the bias and competency of witnesses;*

c) *the pros and cons of using the personal example which the teacher uses in trying to help pupils identify factors which must be considered in evaluating sources of information; and*

d) *possible ways of evaluating the skill which the teacher was trying to develop in this lesson.*

SS 638 (58 minutes): This tape shows two consecutive lessons; in the first, the teacher turns to the Elkin's theory about slavery. He begins by analyzing Elkins' idea about the Sambo stereotype. He asks pupils to identify the characteristics which they associate with the word Sambo. Pupils consider whether or not slaves actually exhibited these characteristics or whether the stereotype was only a prejudiced reaction unrelated to slave behavior. The teacher then gives an informal lecture about the Elkins' theory of how slaves developed certain characteristics because of culture shock and the treatment which they received. He draws upon Elkins' comparison with the concentration camps to illustrate the reasoning behind the theory. He then asks the class whether or not, given what they have learned about socialization and the development of the self-concept, the Elkins' theory seems probable. After a short discussion, the teacher plays several recordings of Negro spirituals and asks whether they think that these songs tend to support the Elkins' theory.

At the beginning of the second lesson shown on the tape, the teacher has pupils sing another song, "Jimmy Crack Corn and I Don't Care." The class then discusses the ideas in this and the other Negro spirituals, the ways in which Negro spirituals were used, and their relationship to the underground railroad.

Students talk about the assumptions which masters had about Negroes which kept them from understanding the intent behind such songs. The teacher introduces examples of slave revolts. He then asks students to draw some conclusions from the songs and the revolts, about whether or not Negroes actually exhibited the characteristics associated with the Sambo stereotype. Students conclude that although some slaves may have developed some of these characteristics, that many may have exhibited them outwardly while inwardly being hostile. They also conclude that slaves sometimes used subtle ways of showing their hostility in addition to the more violent revolts.

SS 638 can be used to illustrate:

a) the use of exposition via informal lecture within an overall inquiry strategy of teaching;

b) the use of the music of an era to teach historical ideas;

c) the use of oral reading and paraphrasing of an account to help develop historical ideas; and

d) the way in which a teacher builds upon ideas learned in previous lessons.

The tape can also be used to stimulate a discussion about:

a) the effectiveness of this informal lecture and how this lecture differs from a formal lecture;

b) the effectiveness with which the teacher draws upon past learning in having pupils analyze an historical interpretation;

c) the effectiveness of the use of Negro spirituals in helping pupils test a theory;

d) the usefulness of the lesson in culminating the section on slavery in the unit; and

e) the pros and cons of spending this much time on an historical interpretation, more particularly on this particular interpretation.

If used with tapes SS 634, SS 635, and SS 636, this tape should prove useful in an analysis of the way in which a teacher organizes a series of lessons to set the background for a discussion of a particular historical interpretation.

SS 639 (39 minutes): This lesson, which is the last before pupils begin their Christmas vacation, uses a comparison to help pupils summarize the impact of slavery upon those who were slaves. The teacher describes a number of concrete details about the conditions of the factory worker of the 1830's. He then asks pupils to work in pairs to compare the life of slaves with the life of factory workers in that era. Each pair is to prepare a short statement indicating whether they would have preferred to be a factory worker or a slave. The tape shows a few sequences of the teacher talking to the pupils as they work on this comparison. During the last part of the lesson, the teacher holds a general discussion on reasons why people would prefer one situation or the other. The discussion helps emphasize the conditions of slavery and the way in which these conditions affected slaves. Pupils identify what they see as the greatest deprivation arising from slavery.

SS 639 can be used to illustrate a type of evaluation in which pupils work in pairs to write an analysis, the use of a comparison to help pupils generalize, and a possible way of culminating a major part of a unit. The tape can also be used to stimulate a discussion of the role of the teacher in this kind of a lesson.

VOLUMES SS 640 - SS 645

This series features an eleventh grade class engaged in an experimental area studies program. Students are nearing the end of their study of the USSR. Pupils have spent approximately twelve weeks on this unit before the lesson shown on this tape. They have studied the geography and history of the Soviet Union and the political, economic, and social systems of the country. In addition, they have spent a little time on the early history of Soviet foreign policy and have obtained an overview of later events during World War II and the Cold War period.

SS 640 (43 minutes): This tape shows a lesson mid-way in the students' study of Soviet foreign policy. At the beginning of the hour, the teacher reviews suggestions made by pupils the day before about reasons for Soviet foreign policy in Eastern Europe.. Having identified factors which affected Soviet foreign policy, pupils try to apply the same general factors to American foreign policy.

SS 640 can be used to analyze the extent to which pupils are able to identify major factors affecting foreign policy. It should also provoke thought about:

a) *the discussion pattern and the role of the teacher in a discussion;*
b) *the kinds of questions which can be asked to elicit different kinds of thought;*
c) *principles which might be used to decide when to probe comments made by pupils;*
d) *ways of relating current affairs to social studies units; and*
e) *the place of this lesson on a continuum between inquiry by pupils and exposition by the teacher.*

SS 641 (52 minutes): The first sequence shows the teacher giving an assignment at the end of a class period. She gives students a study sheet which asks them to identify factors which they think important in Soviet policy in Czechoslovakia and the American policy in Vietnam. They are also to indicate the degree of importance which they would assign to each factor. The rest of the tape shows the lesson the next day. At the beginning of the period, the teacher projects a series of cartoons which focus upon the Soviet movement of troops into Czechoslovakia in 1968. Using these cartoons as a takeoff, the teacher initiates a discussion of similarities and differences between American foreign policy in Vietnam and the Soviet invasion of Czechoslovakia. Pupils discuss common motives for these policy decisions.

SS 641 can be used to stimulate a discussion of:

a) the value of a worksheet to be used by students in preparation for a discussion;
b) the possible values of political cartoons in a social studies class and ways of teaching students to interpret cartoons;
c) the role of the teacher during a discussion of controversial issues;
d) types of questions which should be raised during the discussion of a controversial issue; and
e) the extent of student involvement and interest in this lesson.

The tape can also be used for interaction analysis.

SS 642 (53 minutes): The lesson on this tape shows the last day spent on the study of Soviet foreign policy. A day earlier, pupils held a discussion in which they drew comparisons between factors affecting the Soviet invasion of Czechoslovakia during the summer of 1968 and those affecting U.S. policy in Vietnam. Since a number of students were absent and discussion was still heated at the end of the hour, the teacher continues the discussion in this lesson. After they have identified some of the similarities and differences in factors affecting the foreign policy of both countries, students focus upon the factor of ideology. They try to decide whether or not ideology is more likely to be a real reason or merely an excuse for a foreign policy action. Pupils express their frustration about the difficulty of obtaining accurate information about Vietnam and discuss the problems of evaluating available information. Pupils also discuss the differences which they see in the way in which the general citizenry can influence foreign policy in this country and in the Soviet Union.

SS 642 can be used to analyze the discussion pattern, the role of the teacher during the discussion, and the extent of student involvement and participation. The tape should also provoke thought about:

a) when a teacher should ask questions to get pupils to probe a comment more deeply than has already been done;
b) ways in which a teacher might encourage pupils to identify value and factual statements and ways of handling each type of statement;
c) the degree to which social studies teachers should be concerned about the development of values or the analysis of values;
d) the extent to which the teacher should exert direction over a discussion in order to explore some facets of factors influencing foreign policy which pupils have ignored;
e) whether or not the teacher should have permitted pupils to shift the focus of attention so largely to Vietnam when they were supposed to be comparing U.S. and Soviet foreign policy;
f) whether the teacher needs to spend more time following up this lesson before she turns to a new unit; and
g) the extent to which the teacher is using an inquiry strategy of teaching.

SS 643 (52 minutes): Students have just completed a study of the Soviet Union. Before turning to a study of China, the teacher asks pupils their reactions to the discussion which they carried on during the two previous periods relating to Soviet and U.S. foreign policies. Pupils are asked to fill out a reaction form and they also give brief oral reactions. The teacher poses an imaginary invasion between two imaginary countries and asks whether or not what pupils have learned from their study of Soviet foreign policy could be applied to an analysis of reasons for such an invasion.

During the last two thirds of the period, the teacher introduces a unit on China. She suggests that pupils should try to apply what they have learned about foreign policy to their study of China in order to decide whether or not some of the same factors are important. She then uses a word association test. Students are asked to mention their first reactions when the teacher mentions China and the Chinese people. As students suggest their images of China, the teacher writes them on the chalkboard. One student calls attention to an inconsistency among these images. Students suggest that the inconsistency may arise because they know so little about the country. They analyze factors which may have led to the development of these images and they discuss possible effects of holding such images. During the last few minutes of the period, pupils work in groups to identify questions which they would like to investigate as they study the unit on China.

SS 643 can be used to illustrate:

a) *pupils' reactions to a discussion of a controversial issue;*
b) *the use of pupil reaction forms to give a teacher some feedback;*
c) *the use of an imaginary situation to encourage pupils to apply what they have learned to new data;*
d) *the use of an association form of thinking as a means of introducing a new unit;*
e) *the exploration of pupils' attitudes during the initiatory phase of a unit;*
f) *an unusual way of arousing interest in a particular book; and*
g) *one way of having pupils help plan the topics to be studied in a unit.*

SS 643 also can be used for an analysis of the discussion pattern and the kinds of questions used to elicit different thought processes. It should provoke thought about the role of the teacher during a discussion and about other ways of using an association test to identify pupils' attitudes about a topic to be discussed in the unit.

SS 644 (48 minutes): At the beginning of the first period, the teacher passes out a list of images which a number of American leaders had indicated they held about the Chinese. Students read these statements and compare them with the images which they had indicated the previous day. The class discusses inconsistencies in the list and possible reasons why people may hold inconsistent images. During the last part of the period, pupils work in groups to identify questions which they wish to study about China. At the end of the period, the teacher asks a recorder from each group to tell the class about two or three of the major questions which that group identified.

At the beginning of the second lesson on the tape, the teacher passes out a dittoed list of possible activities on which pupils may work during the unit. She gives pupils a browsing period to enable them to look at books and to choose the individual or group projects on which they wish to work. Only selected sequences of this period are included to show the role of the teacher during the study period.

SS 644 can be used to illustrate:

a) the way in which a teacher can use the results of an attitude survey to arouse interest in a unit;

b) the use of group work to help plan the topics to be studied in a unit;

c) the role of the teacher during such a planning session;

d) the use of a browsing period in which pupils can look at books and decide upon the projects they will do during a unit.

Those viewing SS 644 can also analyze the discussion pattern, the kinds of thought elicited by different types of questions, the classroom atmosphere and factors contributing to this atmosphere. The tape should prove helpful in initiating a discussion of possible ways of having pupils make choices of projects to work on during a unit and the use of varied activities to provide for individual differences.

SS 645 (53 minutes): Students begin work on Chinese geography. The teacher shows them several slides which help them place China in relationship to other countries. A third slide provides an overlay map and graph which permits pupils to compare the area, the population, and the per capita income of China and the United States. The teacher asks pupils to set up hypotheses on the basis of these slides. During the rest of the period, pupils analyze a map showing only the river system of China. They work in groups to set up hypotheses about as many things as they can on the basis of the data on this map. After pupils have worked in groups, they compare their ideas in a general class discussion.

In the second lesson shown on this tape, pupils use atlases to check their hypotheses. They then revise the hypotheses to develop accurate statements about the physical features of China. During the last part of the period, the teacher uses the chalkboard to sketch an outline map of China and adds physical features to it as they are suggested by members of the class. Students hypothesize about the probable population distribution. Pupils also identify some of the misconceptions about China which they had held previously.

SS 645 can be used to illustrate:

a) the use of an inquiry strategy of teaching a lesson in which pupils apply previously-learned concepts and generalizations in order to develop hypotheses about an area on the basis of what they can see on one map pattern;

b) the way in which pupils can use atlases to test hypotheses about an area;

c) the use of a sketch map to indicate pictorially the statements which students make about an area; and

d) a way of using maps to initiate a study of the geography of an area.

The tape can also be used to stimulate a discussion of:

a) the kinds of questions which can be raised in evaluating charts as sources of information;
b) the role of the teacher in a lesson based upon inquiry by pupils;
c) the degree to which pupils are able to apply previously-learned concepts and generalizations in hypothesizing about an area on the basis of one map pattern;
d) possible follow-up lessons for each of the lessons on this tape;
e) possible reasons for returning to students' earlier misconceptions as they acquire new data about an area;
f) the classroom atmosphere and factors contributing to this atmosphere; and
g) the pros and cons of an inquiry strategy of teaching.

SS 645 can also be used in a curriculum class to initiate an analysis of the way in which an inquiry strategy of teaching affects the selection and organization of activities within a unit.

VOLUMES SS 647 - SS 652

The twelfth grade students shown in this series are studying an experimental course, "Value Conflicts and Policy Decisions." At the moment they are beginning a unit on "War and Peace."

SS 647 (54 minutes): As the tape starts, the teacher is asking students to identify the points which should be included in defining the problems of war. He then gives pupils a pre-test, using a series of questions which appeared in a newspaper magazine section the previous year. Students compare their answers with those provided by the people who developed the questions. Afterwards, the teacher shifts the focus of the lesson to an analysis of the damage which can be done in modern thermo-nuclear wars. Drawing upon what students already know, the teacher helps the class understand different effects arising from thermo-nuclear blasts underground, at ground level, in the air, and at high altitudes. He then uses a map of their own metropolitan area to illustrate the effects of dropping a 50 megaton bomb at the center of Minneapolis. Students compare the problem of thermo-nuclear war with the problem of wars in the past. The lesson ends with a brief discussion of whether or not the modern world can afford to carry over past attitudes toward war to an age in which thermo-nuclear war is possible.

SS 647 can be used to illustrate the introduction, development, and conclusion of a single lesson, and the use of a pre-test to stimulate interest in a unit. The tape can be used to provoke thought about:

a) the discussion pattern among teacher and pupils;
b) whether or not a teacher should insist upon recognition before a student speaks;
c) principles which might be used to decide when a pupil's comment should be probed more deeply and when to do so would interfere with the flow of the lesson;
d) the types of questions asked to provoke certain kinds of thought;
e) the way in which values are treated and the extent to which the teacher permits his own attitude toward war to affect his handling of the lesson;
f) the effectiveness of this lesson in achieving the objectives indentified for it, and in initiating a unit on war and peace;
g) the classroom atmosphere and the factors contributing to this atmosphere; and
h) where this lesson might be placed on a continuum between exposition by the teacher and inquiry by students.

SS 648 (39 minutes): In the lesson shown on this tape, the teacher asks pupils to try to define war. Pupils make many suggestions and raise questions about other definitions. The teacher then gives pupils a list of ten definitions and asks them to choose the one which they think most useful. Again pupils argue about the definitions. Finally, the teacher asks each pupil to write out his own definition of war. He uses the difficulties they encounter in doing so to emphasize the complexities of war.

SS 648 should stimulate a discussion of:

a) possible reasons for spending so much time on having pupils try to work out a clear definition of war;
b) reasons for having pupils try to define war before they look at definitions of war;
c) reasons for having each pupil write out his own definition of war following a lengthy discussion of the meaning of war;
d) the way in which the teacher uses difficulties in defining war to develop one of his objectives;
e) the discussion pattern in the class and the way in which the teacher perceives his role in the discussion;
f) the types of questions which can be used to elicit different types of thought processes; and
g) the place of this lesson on a continuum between exposition by the teacher and inquiry by pupils.

SS 649 (43 minutes): In the lesson shown on this tape, the teacher asks pupils to try to describe attitudes of Americans toward war. He asks pupils to identify attitudes of people going into the armed forces and then he has them compare these attitudes with the attitudes expressed in several poems which he reads aloud. Pupils spend considerable time arguing about whether or not any cause is worth dying for. The teacher asks pupils to identify the assumptions about war of those who agree that it is. The class then listens to recordings of three different songs which express attitudes about war. After pupils have identified these attitudes, the teacher asks them to identify implications of the fact that people have danced to such songs. At the end of the period, the teacher gives an assignment in which pupils are to examine the presentation of war in mass media as compared to the attitudes expressed in the songs which they have just heard. In later lessons, pupils consider inconsistent attitudes toward war in this country, study the causes of war and later turn to possible solutions for war.

SS 649 should prove helpful in stimulating a discussion about:

a) *reasons for a review at the beginning of a lesson;*
b) *ways of handling values in a social studies class;*
c) *the use of poetry and songs in a social studies class and effective ways of using them;*
d) *the discussion pattern in the class;*
e) *the extent of pupil interest and the classroom atmosphere;*
f) *the amount of time which can be justified for different activities; and*
g) *the place of this lesson on a continuum between inquiry by pupils and exposition by the teacher.*

SS 650 (56 minutes): This tape shows parts of two consecutive lessons. In the first lesson pupils contrast the effectiveness of different types of media in expressing attitudes toward war. During the last part of the period, pupils work in buzz groups to discuss attitudes which are needed for peace and ways of developing them. In the second lesson pupils look at attitudes expressed in another poem and in television programs and newspapers. They then answer questions in an attitude test which focuses upon possible ways of preventing war. Pupils discuss the questions and the contradictory attitudes represented in the class. Then the teacher asks them to identify their present views about causes of war and what they now think might be possible solutions for war.

SS 650 can be used to stimulate a discussion about:
- *a) uses of music, cartoons and poetry in a social studies class;*
- *b) possible reasons for using buzz groups and ways of organizing them;*
- *c) ways of handling values in a social studies class;*
- *d) the discussion pattern in the class and the role of the teacher in the discussion;*
- *e) types of questions which can be used to elicit different types of thought processes;*
- *f) the appropriate point at which to give pupils an overview of an entire unit; and*
- *g) the place of the lesson on a continuum between exposition by the teacher and inquiry by pupils.*

SS 651 (52 minutes): At the beginning of the first lesson on this tape, pupils viewed a film, "The Hole," which deals with accidental nuclear destruction. The film is not included on the tape. After pupils have talked about possibilities of such an accident and the implications arising from such possibilities, the teacher gives them a four-point attitude scale. Pupils' responses are tabulated, and the class discusses inconsistencies in these attitudes. The teacher uses responses to one question to introduce Waller's self-fulfilling prophesy. Pupils discuss, in a heated fashion, the question of whether or not war is inevitable because of human nature or whether human nature can be changed.

In the second lesson shown on the tape, the teacher has pupils read an article which is highly critical of the use of military toys. Pupils discuss their reactions to the article and the assumptions of the author. The teacher uses the article to develop the idea of socialization as a causative factor for war. He then gives pupils an assignment of a reading on the causes of war. Pupils spend the rest of this period and the next period (not shown on the tape) in working on the assignment. They then analyzed causes and tried to develop a generalization about causation. (In later parts of this unit, pupils look at ways in which men and nations have resolved conflicts in the past. They analyze our nation's basic foreign policy in regard to war and they try to identify possible solutions to the problem of war.)

SS 651 should provoke thought about:
- *a) a discussion pattern and the role of the teacher in this discussion;*
- *b) the classroom atmosphere and level of interest;*
- *c) the kinds of questions which can be used to elicit different types of thought processes;*
- *d) ways of developing critical thinking skills;*

e) the use of an attitude survey to help point up inconsistencies in thought;
f) the handling of values in a social studies class;
g) ways of relating a particular lesson to an entire unit; and
h) possible ways of following up on some of the comments which pupils make during the lesson.

If used with the other tapes in the series from SS 647 through SS 652, this tape might be used in a social studies curriculum class to analyze the flow of activities from one lesson to another.

SS 652 (49 minutes): In the lesson shown on this tape, the teacher uses the chalkboard to list the different generalizations which pupils have developed regarding the causes of war. Finally, several students express their frustration because they feel that no one cause can be identified. The teacher says that perhaps such a statement represents a generalization about causation. The teacher then uses an analogy with a school situation to help pupils understand Waller's "War Fever" thesis which he says might come as close to any to describing the cause of war. Afterwards, pupils discuss very briefly whether or not they think the thesis explains all wars. Finally, the teacher explains the relationship between beliefs about causation and possible solutions for war. He shows several cartoons about war and asks pupils to identify the assumptions and the kinds of solutions which might be possible, if one accepted these assumptions.

SS 652 can be used to provoke thought about:
a) the importance of a lesson plan which provides for a good introduction, careful development, and an activity at the end to tie the threads of the lesson together;
b) the discussion pattern and the way in which the teacher perceives his role in the discussion;
c) the pros and cons of using the analogy which the teacher uses to explain a theory about war;
d) the use of political cartoons in a social studies class;
e) the treatment of values in a social studies class;
f) the extent to which the lesson is successful in achieving objectives; and
g) the place of this lesson on a continuum between inquiry by pupils and exposition by the teacher.

SOCIOLOGICAL RESOURCES FOR THE SOCIAL STUDIES (SRSS)

OVERVIEW

Materials prepared by SRSS entitled, Inquiries in Sociology, are featured in the following twenty-six tapes all showing twelfth grade sociology classes:

Volume(s)	Subject	Teacher	Location and (Type of School)
SS 600-603 605-610	Inquiries in Sociology	Mr. Ronald L. Allen	St. Louis Park, Minn. (suburban)
SS 611-618	Inquiries in Sociology Section III	Mr. Galen R. Hosler	Niles Township Ill. (suburban)
SS 653-660	Episode: Stimulating Social Conflict	Mr. Jeremy Gottstein	Minneapolis, Minn. (urban)

The tapes in the series ranging from SS 600 to SS 610 were made during the winter of 1968. The materials developed by SRSS were in their preliminary form and had not been tested previously. The audio quality falls below present recording levels; yet, the content has been judged useful as indicated in the descriptions of individual tapes in the series.

A major characteristic of the series is that it moves back and forth between two classes of varying ability levels, comparing and contrasting the reaction of each to the same experimental materials. Neither class is grouped intentionally, but as so often happens, one has a considerable number of high ability students whereas the other is bi-modal with fewer students of high ability, few average students and quite a number of low ability students. Both classes are shown in many of the tapes; however, Volumes SS 601, 603, 609 and 610 focus on the high-ability class, whereas, Volumes SS 602 and 605 show the class of generally lower ability.

The second series, Volumes SS 611-618, was made in the spring of 1968. At this time, the materials being used were still in their experimental form; however, due to relatively good acoustics in the Niles Township High School, the audio quality is considerably better than that of the other two series. Only one class is shown throughout, a class described as ungrouped, but having a preponderance of students of above-average ability.

Volumes SS 653-660 were recorded in May, 1969, more than a year later than the first two. They were made at Roosevelt High School which is located in a community which was in a period of transition which, in turn, was causing rather rapid changes in the school population. Viewers must observe these tapes bearing in mind that they are watching seniors in May, a challenge to both teacher and materials. The class itself is considered to be heterogeneous, but somewhat above average.

Materials used in these classes are available from Allyn and Bacon, Boston; as prepared by the Sociological Resources for the Social Studies, a project of the American Sociological Association. It is essential to have these in hand while viewing the tapes if one is to derive their full benefit. There are undoubtedly a number of discrepancies between the material used by the teacher and the published course, inasmuch as the materials were new and unrevised at the time the taping was done.

Although the tapes are grouped in series to indicate that they represent the same unit, school, classes and teacher, the tapes may be used singly. Unless otherwise designated, any of these tapes are believed to be useful in familiarizing prospective or in-service teachers with the nature and design of SRSS materials as well as for general social studies or curriculum instruction purposes.

All of the tapes in this section have been edited by Dr. Edith West of the University of Minnesota. She has prepared the following supplementary materials to accompany each of the tapes:

1. Guide for locating important events on the tape.
2. Objectives for the lesson.
3. Background information providing a context for the tape.
4. Suggested uses for the tapes, including illustrative discussion questions.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUMES SS 600 - SS 610

This series of tapes shows a twelfth grade class which is studying an experimental course, "Inquiries in Sociology."

SS 600 (52 minutes): This tape contrasts two different ways of teaching a lesson. The first part compares the use of a lecture and of question-answer procedures to do five things: (1) to review material; (2) to introduce a new topic; (3) to emphasize important points in a reading assignment; (4) to develop a concept; and (5) to develop the importance of empirical data in sociological research. *This part of the tape can also be used for an analysis of the discussion pattern and of the role of the teacher in developing classroom atmosphere.*

The second part of the tape shows excerpts from the rest of the period in both classes. The teacher gives directions for answering a questionnaire, gives an assignment, and answers questions which individuals have as they work on the questionnaire. *This part can be used to provoke discussion of: the role of the teacher when pupils are working by themselves on* *any type of written activity; procedures for giving directions and making assignments; and classroom control.*

SS 600 is of particular use in pre-service education classes. One segment of the tape might be used in an in-service education program or workshop to stimulate thought about effective ways of teaching students the need for empirical data in sociological research and of introducing the questionnaire as a source of data.

SS 601 (57 minutes): This tape shows a lesson in which the class considers the expectations which adults hold as to how adolescents should behave. The teacher uses a question and answer procedure to emphasize the important ideas from the reading assignment on the "official" adolescent culture and its relationship to the American social structure. Halfway through the period, the teacher tells students to act like adults, that they are not behaving as well in front of the television cameras as students in another class. This remark sparks pupil indignation. Students protest his remark and then criticize the course and the teacher's procedures. The teacher does not lose his temper but rather permits pupils to discuss the things bothering them and explains his position. He urges them to give the experimental course more of a fair trial, but to continue to express their feelings rather than exhibiting apathy or talking to others during the class. He, in turn, will try to modify materials and procedures somewhat to meet their objections.

SS 601 can be used to promote a discussion of ways of handling vocal student dissent and of factors giving rise to such dissent. The first half of the tape can be analyzed in terms of types of questions and the interaction among students and the teacher. The earlier interaction can be contrasted with the interaction which takes place during the protest period. Students make thought-provoking statements about the pacing of the course, lectures, discussions and the role of the teacher.

SS 601 is of particular use for pre-service education classes. However, it might also be used for in-service training or in a workshop, if there is a need to analyze discussion patterns, the pacing of materials, and classroom atmosphere. The tape could also be used as a case study for a graduate class on supervision.

SS 602 (49 minutes): The lesson focuses upon the norms expected of adolescents by adults, changes in the social structure which have brought about changes in these norms, and aspects of the social structure which support norms. The teacher conducts a question-answer discussion on a reading assignment, makes an assignment for the next day, and conducts a supervised study period.

SS 602 can be used for both interaction analyses and the analysis of types of questions. It can also be used to stimulate a discussion of:

a) the effectiveness of techniques used for developing concepts and generalizations;
b) the role of the teacher during a supervised study period; and
c) factors affecting the classroom atmosphere.

In addition, the tape can be used to promote evaluation of certain kinds of techniques and materials for promoting learning through pupil inquiry--one of the purposes of those who developed the experimental course. If used in conjunction with SS 601, this tape should provoke a discussion of the reasons for differences in the vehemence of pupil dissent to some of the procedures, and the extent to which a teacher modifies a lesson from one class to another in terms of differences in classes and as a result of the reactions of pupils to the lesson during an earlier period.

Although SS 602 is recommended especially for undergraduate education classes, parts of the tape would be useful for in-service use or for special workshops dealing with the curriculum materials produced by SRSS. The first part of the tape should prove useful in a graduate class in which students are trying to use interaction analyses or analyze types of questions. It could also be used in a graduate class which focuses upon curriculum development and ways of revising curriculum materials in the light of classroom tryout.

SS 603 (49 minutes): This lesson focuses upon adult-child conflict, reasons for the conflict, and ways of resolving issues. During the lesson the previous day, the class voiced vehement objections to the course materials and teaching procedures. The teacher promised to try to modify procedures to make the class more interesting. This tape shows the use of buzz groups and a follow-up class discussion designed to promote greater pupil participation and interest.

SS 603 can be used to stimulate a discussion about:

a) possible advantages and disadvantages of using buzz groups, techniques for setting up and working with buzz groups, and ways of making use of their findings after they have completed work;
b) kinds of parental-child conflicts which have implications for teacher-pupil relationships; and
c) types of topics which arouse interest among twelfth grade students.

The tape provides an interesting contrast both as to classroom atmosphere and discussion pattern with the previous day's lesson which is shown on tape SS 601. The tape can also be used to analyze the effectiveness of an assignment.

SS 603 should prove particularly effective with pre-service classes in social studies methods, general methods, or student teacher seminars. The tape should prove helpful in in-service training programs with teachers who have not used buzz groups in the past. The tape can also be used with either pre-service or in-service programs to illustrate ways in which a teaching guide can be modified in the light of events which take place in a particular class.

SS 605 (48 minutes): This tape shows the class discussing a reading assignment which deals with a sociological study testing an hypothesis about factors affecting student rebellion. The teacher has the class restate the hypothesis, explain the meaning of the hypothesis, examine assumptions of the man who carried out the study, and restate the hypothesis once more, substituting specific for some of the general statements in the broad hypothesis. Students then figure out how the class can use data from a questionnaire administered in its school to retest the hypothesis.

SS 605 can be used to stimulate discussion of:

a) the kinds of problems which pupils are likely to raise about studies testing hypotheses;
b) the importance of trying to predict the questions which pupils will raise before the class begins;
c) effective ways of handling student criticisms of a study being analyzed by the class;
d) the importance of teaching pupils how to identify assumptions;
e) possible ways of using the chalkboard to emphasize important points;
f) ways of handling pupils who are apparently sleeping or not paying attention in class;
g) possible reasons for diverging from a lesson plan; and
h) the extent to which a lesson achieves its stated objectives.

SS 605 can be used for an undergraduate class in social studies methods, or for graduate courses in social studies education, and in-service courses or workshops for social studies teachers. Some of the questions which might be raised about the lesson with those who have never taught can be omitted with experienced teachers. The emphasis with experienced teachers might be upon points a through e and g indicated above.

SS 606 (56 minutes): Students are retesting a sociological hypothesis, using questionnaire data collected from a sample of seniors in their school. Earlier, students had read and discussed the original study which tested this hypothesis. Their assignment before coming to class was to read an article describing how to use self-coded questionnaires to develop indexes which can be used to measure variables and how to use these data to test hypotheses. The tape shows the class identifying questions which can be used to form an index of adolescent rebellion, checking answer sheets to develop an index of rebellion for each respondent in the sample, sorting answer sheets into categories, and tallying the data. Students then analyze the data in order to test the hypothesis. They suggest possible reasons why there is a much higher rebellion percentage among seniors in college preparatory classes in their school than in the original study.

The last part of the tape shows a short sequence in another class which was studying the same lesson. The teacher asks students to identify factors which might be used to develop a better index of rebellion for their own school. The teacher and class also analyze possible causes for divergence of results from the original study because of the sample used and the kind of curricular tracks used in their own school. The teacher describes two original studies which other classes are now making because of questions which arose as a result of testing the original hypothesis.

In addition to illustrating how pupils can test hypotheses using their own data, SS 606 can be used to stimulate discussion about productive ways of having students handle such data in class, and about differences in the discussion pattern as compared to that illustrated in the same class in a previous tape (e.g. SS 600). The tape can also be used to provoke thought about kinds of studies which students might make on their own, using data from a questionnaire administered to students in their own school. The last sequence can be used to initiate a discussion of ways of helping students evaluate sociological studies.

SS 607 (61 minutes): At the beginning of the lesson the teacher asks pupils to develop hypotheses and figure out ways of measuring the variables so that the hypotheses can be tested. He then gives them another hypothesis, related to the same general question, and passes out questionnaires which they and other classes have taken earlier. He indicates which questions can be used to develop parental-influence and self-esteem indexes, and then gives directions as to how to place checks on answer sheets in order to obtain index scores for each respondent. A pupil calls attention to an error in the directions, and the teacher examines the questions and realizes that the directions given him in a guide were not accurate. He spends time rereading the questions and working out new directions while pupils sit and wait. He has to do this several times before the class is able to work out an accurate index score.

The last part of the tape shows a different class studying the same lesson. This class has checked the index scores on the same answer sheets. The teacher tallies data provided by one student after another on a form which he projects with an overhead projector. A very brief analysis of whether or not the data support the hypothesis is followed by an assignment to read an article which describes the way in which a sociologist has tested the same hypothesis.

SS 607 can be used to provoke discussion of:

a) ways of helping students learn to develop hypotheses and figure out ways of testing them;
b) effective procedures for helping pupils work out index scores for respondents;
c) effective ways of tallying questionnaire data;
d) the appropriateness of tallying questionnaire data in class, once pupils have gone through the procedure for one hypothesis; and
e) the importance of careful lesson planning prior to class.

SS 607 should prove useful in pre-service education classes, in in-service education programs and workshops, and in graduate classes in both curriculum development and supervision. If the tape is used for in-service education programs or workshops on how to use SRSS materials, the instructor may wish to shorten the viewing time by omitting that part of the lesson in which the teacher must work out new directions.

SS 608 (60 minutes): Before the actual lesson begins, the teacher discusses the test which will be given in a few days. The lesson ends as the teacher asks students to work out a research design to test one of the deduced hypotheses. The tape shows most of one class period. It also includes a short comparative sequence from another class in which students raise, much more strongly, the question of whether or not a deduced hypothesis must be tested if the propositions from which it is deduced have already been tested.

SS 608 can be used to stimulate a productive discussion about:

a) ways of teaching students to build new hypotheses;
b) the importance of careful lesson planning, including the development of concrete examples to explain parts of a lesson which are likely to prove difficult;
c) ways of developing logical thinking; and
d) ways of preparing students for a test.

The tape also provides a useful comparision of discussion patterns and ways of making assignments with several earlier tapes made of the same class.

SS 609 (31 minutes): The teacher begins the class with a discussion of reasons why the class cannot test two hypotheses which class members deduced from other tested theorems the day before. Students identify the items on the questionnaire which can be used to build an index of autonomy in peer relationships. They then proceed to tally data from questionnaire sheets in order to test the hypothesis that the greater the autonomy from peers, the less the rebellion against school authority. Once the tallying is completed, pupils test their hypothesis against the data. At the end of the hour the teacher asks students to prepare a written summary of the study which they have just completed.

SS 609 can be used:

a) to show how students can use questionnaire data to test an hypothesis suggested by a class member;
b) to discuss ways of speeding the process of tallying data from questionnaires;
c) to stimulate a discussion of effective ways of using a chalkboard;
d) to discuss the role of the teacher when members of the class remain silent in response to questions;
e) to discuss ways of teaching pupils to evaluate a sociological study; and
f) to analyze possible reasons for the assignment made at the end of the class period.

SS 609 is useful for both pre-service and in-service education. In in-service classes, a very short sequence, near the beginning, might be omitted. The entire tape would be useful in a graduate course on supervision or in graduate courses on social studies education.

SS 610 (58 minutes): This tape shows a class beginning its study of social institutions. Since completing the work shown in previous tapes, students have studied the concept of socialization. In this lesson the teacher uses a reading assignment which provides a fictionalized account of a family. He asks students to list chronological events in the life of different members of the family. Then he asks the class to decide whether each event was the result of a personal choice or of an outside influence over which the individuals had no control. Students work individually to try to categorize the events not due to personal choice. Afterwards, the teacher conducts a general class discussion, in which he lists on the chalkboard those items and categories which they suggest. The teacher then relates the categories to institutions, defines institutions, and gives an assignment.

SS 610 can be used to discuss:

- *a) some of the problems which may arise when pupils are asked to categorize data, and stimulate a discussion of how such problems should be handled;*
- *b) how definitions of important terms might be handled in a class;*
- *c) alternative ways of handling a reading assignment in order to stimulate student interest and achieve objectives;*
- *d) the effectiveness of assignments; and*
- *e) problems of classroom control.*

VOLUMES SS 611 - SS 618

This series of tapes shows a twelfth grade sociology class working on Section Three of an experimental course, "Inquiries in Sociology." Section Three focuses upon inequalities in American society. Students have already studied social stratification and have now turned to the topic of inequalities arising out of ethnic and minority group status.

SS 611 (56 minutes): Before coming to class, groups of students examined different tables presenting data on inequalities. In this tape, the teacher gives students a list of quotations about equality in this country; this list is used to evoke reactions to the disparity between the ideals and the actual conditions in which many members of minority groups find themselves. The teacher raises questions about the reasons for such inequalities. He then spends the rest of the hour having pupils examine in more detail the tables which compare data on whites and non-whites in this country. Pupils are asked to interpret the tables and try to explain some of the data.

SS 611 can be used to provoke discussion about:

- *a) the use of quotations to help pupils identify a problem;*
- *b) discussion patterns among pupils and teacher;*
- *c) the use of tables to develop important social science concepts and generalizations;*
- *d) the meaning of inquiry strategies of teaching; and*
- *e) the importance of varied procedures within one lesson.*

SS 612 (42 minutes): This tape, which is best viewed in combination with tapes SS 613 and SS 614, shows the class viewing and commenting upon Part One of a film which contrasts the boyhoods of Hubert Humphrey and James Baldwin. Part One of the film shows the section on Humphrey. The film is used to help students understand the ways in which childhood events affect a person's self-concept.

Students are given a list of questions to consider as they view the film. (Permission of Benchmark Films, Inc. has been obtained to include Part One of the film on this tape.) After students have viewed it, they discuss their reactions. The teacher then asks them to make further notes and organize these notes around the questions which they received at the beginning of the class.

SS 612 can be used to promote a discussion of:

- *a) the comparative effectiveness of films and other media for accomplishing certain kinds of purposes;*
- *b) ways of introducing films and making use of them after they have been shown; and*
- *c) the difference in discussion pattern shown in this tape and in some others which viewers have seen.*

SS 613 (39 minutes): This tape shows the class the following day. Before students view the part of the film on Baldwin, they are given a study guide with questions similar to those used when viewing the first part of the film on Humphrey. (Permission has been given by Benchmark Films, Inc., to show Part Two of the film on the tape.) After seeing the film, pupils react to it and compare it with the part which they saw the day before. The teacher gives an assignment and pupils begin work. The teacher moves around the room as pupils raise their hands, but he refuses to draw generalizations for pupils even when asked.

SS 613 can be used for the same purposes as tape SS 612, as well as to stimulate discussion of the teacher's role in supervised study when a course is designed to promote inquiry by pupils. The tape is best viewed in combination with SS 612, in order to stimulate discussion of the effectiveness of breaking up a film over two days, when a film is to compare feelings and evoke a mood. The tapes can be interrupted, at the end of the classroom film in each lesson, and viewers can be asked to identify objectives for the lesson and plans for follow-up of the film. Later, they can compare their own plans with those used by the teacher. They can also compare the plans in the "Instructor's Guide" with those actually followed, as well as their own objectives with those of the people who developed the experimental course.

SS 614 (47 minutes): The class is discussing the two-part film which they have seen and reacted to only briefly on the two previous days. The film, My Childhood, contrasts the early lives of Hubert Humphrey and James Baldwin. It is used to help students understand how a member of a racial minority group reacts to discrimination and how social institutions affect people in our society differently. Most of the class period is devoted to a general class discussion of the film. The end of the tape shows the teacher making a follow-up assignment.

SS 614 should be used after viewers have studied tapes SS 612 and SS 613. The tape can be used to stimulate thought about:

- a) *the length of time which discussions can be carried on effectively in a twelfth grade class;*
- b) *discussion strategies for promoting different kinds of thought processes;*
- c) *the importance of the wording of questions to elicit different cognitive behaviors; and*
- d) *ways of varying the pace of a discussion or of varying discussion procedures in order to provide variety within a class period.*

If the tape is interrupted prior to the assignment given near the end, it can be used to provoke a discussion of questions such as: What kind of lesson might be useful as a follow-up to this one, in order to emphasize the effects of discrimination upon a child's self-concept? How can such a lesson be designed so as to use an inquiry approach rather than exposition? Viewers might then watch the sequence showing the assignment, study the printed materials used by the students and the lesson plan for the next day, and discuss the design of the lesson.

SS 615 (46 minutes): The teacher is using an inquiry teaching strategy to help students understand how racial discrimination can affect a Negro's self-image at a very early age. Pupils have examined a six-year-old child's drawings of both Negro and white boys and girls. They know that the drawings were made by a child in a newly-integrated school, but they have not been told whether the child is black or white. The teacher asks them to hypothesize about the child's race on the basis of the drawings and to indicate their reasons for their guesses. He then asks them to identify specific differences among the drawings and to try to figure out how very early experiences could affect a Negro child's self-image to the extent indicated by these drawings. Pupils and the teacher draw upon earlier lessons to help explain the effects of discrimination upon the self-perception of Negroes.

SS 615 can be used to stimulate discussion of:

- a) *the use of an inquiry strategy of teaching and pupil reactions to such a strategy;*
- b) *the decisions facing a teacher using such a strategy, about how much he should tell pupils and how much he should insist that pupils work out for themselves;*

c) the importance of continuity and sequence in curriculum planning;
d) possible follow-up lessons to teach pupils more about the methods of inquiry used by sociologists;
e) ways of summarizing what has been learned in a class session;
f) the discussion pattern among pupils and teacher;
g) the effectiveness of the lesson in achieving goals identified for the lesson; and
h) the possible effects of such a lesson in attitudes toward race.

SS 615 is perhaps the best example of the inquiry teaching strategies recommended by SRSS for their experimental course, "Inquiries in Sociology."

SS 616 (61 minutes): This tape shows two consecutive days; the teacher is using an audio-tape recording entitled "The World Across the Street." This tape consists of interviews with two groups of boys of the same age and social class, living in the same housing project. One group is made up of white boys and one of Negroes. The boys talk about their own vocational plans and their school. Each group also reacts to the recording made by the other group.

Before playing the tape, students try to identify simple research designs for testing the assumption that the differences in self-perception of Negroes and whites found in earlier lessons might be due to social class rather than to treatment as members of different races. Once pupils have identified a possible design, the teacher introduces the recording. He interrupts the tape at the end of each major section and holds a discussion about it. The next day he plays the rest of the recording, again interrupting it at various points to ask questions or emphasize certain points. This video tape includes much of the discussion, but omits most of the recording itself in order to show the two consecutive lessons built around the recording.

SS 616 can be used to initiate a discussion of:

a) ways of introducing and using a sound recording;
b) the comparative effectiveness of sound recordings as against written transcripts of recordings based upon interviews;
c) where this lesson falls on a continuum between exposition by the teacher and student inquiry;
d) ways of helping pupils relate a current lesson to past learning;
e) the extent to which twelfth grade students in a heterogeneous class can develop simple research designed to test hypotheses, once they have analyzed other research studies; and
f) possible ways of modifying the lesson in classes of differing ability levels and socio-economic backgrounds.

SS 617 (44 minutes): Pupils have already studied social class, tables presenting data on discrimination against non-whites, and materials showing how discrimination affects the self-perceptions of Negroes. Both students and their parents have taken the same Social Distance Scale, and a class committee has been at work tallying the data from their responses. In this tape the committee chairman presents a summary of the data and explains the procedure which the committee has used. The teacher then leads a discussion of the data. Pupils compare their results with the results from a national sample and explore reasons for the differences, possible explanations for similar rankings from national samples in 1927 and 1957, and the differences in attitudes toward various kinds of social relationships. Pupils examine the composition of the samples used and the effects of cultural learning upon attitudes.

SS 617 can be used to:

a) *illustrate one possible use of statistical data obtained from administering scales to pupils and their parents;*
b) *stimulate discussion of ways of developing skill in evaluating data acquired from sampling studies;*
c) *analyze aspects of thinking engaged in by pupils; and the kinds of questions which can be used to stimulate certain types of thought processes;*
d) *analyze a lesson in terms of inquiry strategies in learning;*
e) *compare an actual lesson with the original lesson plan;*
f) *analyze a discussion pattern and the pacing of a discussion; and*
g) *evaluate the effectiveness of an assignment.*

SS 618 (53 minutes): This tape shows the class discussing the stereotypes about minority groups. The teacher begins by summarizing the previous lesson. He then initiates a discussion on the image of the Negro as seen in the mass media. This discussion is based upon the assignment which students were to do before coming to class. Later in the lesson, the teacher moves on to a discussion of the data collected on a scale measuring stereotypes about Negroes and Jews in this country. The class compares the data from their own class, data collected from their parents, and the data from a national sample. The discussion focuses upon the prevalence of certain stereotypes, reasons for differences in the extent to which they are held by pupils and by the national sample, and ways in which these stereotypes have developed. Some attention is also given to the effects of these stereotypes upon discrimination against minority group members.

SS 618 can be used to promote analysis of:

- *a) the value of a summary of a preceding lesson as a means of introducing a lesson and possible ways of providing such a summary;*
- *b) the effectiveness of using current materials in newspapers and magazines as data for developing generalizations in sociology;*
- *c) the effectiveness of using questionnaire data obtained from pupils and their parents to develop sociological ideas;*
- *d) the effectiveness of drawing upon pupils' experiences to develop sociological ideas and interest;*
- *e) the effectiveness of reading aloud excerpts from research findings during the course of a discussion, in order to emphasis a particular point;*
- *f) alternative ways of using such research findings;*
- *g) differences in discussion patterns and their effects upon pupil involvement and interest;*
- *h) the pacing of a discussion and the importance of variety within a lesson; and*
- *i) the continuum between exposition and inquiry teaching strategies.*

VOLUMES SS 653 - SS 660

The tenth grade pupils shown in this series are studying a ten-day episode on "Simulating Social Conflict," developed by SRSS. The episode uses three rounds or versions of two different simulation games, both simulating conflict situations. The first game is called "Parents' Dilemma" and simulates a conflict situation, in which two parents with an only child feel possessive about the child. Pupils are not told what the game simulates, before they play the first round; before playing the second round they are told only that the partners represent parents; and, before the third round, that the conflict situation involves a child. A second game, "Resources and Arms," simulates conflicts between nations and involves a dilemma over whether to put more of a nation's resources into arms or into peaceful production.

SS 653 (54 minutes): The two lessons on this tape are the beginning lessons in the first episode. Pupils play two versions of "Parents' Dilemma." Afterwards, they try to decide what the game has simulated and analyze the models used in the simulation game.

SS 653 should provoke thought about:

- *a) the purpose of simulation games;*
- *b) the difference between simulation games which do not tell pupils what a game is simulating until after they have played it, as compared to simulation games in which pupils know what they are simulating when they begin the game;*

c) possible advantages and disadvantages of an inquiry strategy of teaching;
d) the role of the teacher who is using an inquiry strategy; and
e) ways of using SRSS episodes in different classes.

SS 654 (53 minutes): In the lesson just prior to the one shown on this tape, pupils played the second version of the simulation game, "Parents' Dilemma." They were to try to answer questions about their strategies, what happened in the game, and what they think the game simulates, before coming to class for the lesson shown on this tape. They were also to read a brief article on models and the criteria for good models. They then discuss what the simulation game may be simulating. Finally, they noticed changes in their behavior from the first to the second version of the game and discuss possible reasons for these changes.

SS 654 can be used to provoke thought about:
a) ways of teaching pupils about the use of models in the social sciences;
b) principles which might be used in deciding when pupils should know and when they should not know what a particular game is simulating, before they play it;
c) reasons for asking pupils to guess what a game was simulating, rather than telling them this as soon as they have completed the game;
d) the preparation needed before using a simulation game in class; and
e) the importance of a follow-up discussion after playing a simulation game.
SS 654 can also be used for interaction analysis and an analysis of the kinds of questions which the teacher uses.

SS 655 (37 minutes): In the lesson shown on this tape, the pupils review the use of models in the social sciences and then play the third version of the game, "Parents' Dilemma."

SS 655 can be used to provoke thought about:
a) reasons for teaching pupils about the use of models in the social sciences and ways of teaching them how models are used;
b) reasons for keeping pupils in the dark about the situation simulated in some kinds of simulation games;
c) the degree of interest which pupils have in the simulation game;
d) reasons for asking pupils to answer questions about the game before they come to class to discuss it;
e) the difficulty level of the assignment given at the end of the lesson;
f) the discussion pattern in the class; and
g) the place of the lesson on a continuum between exposition by the teacher and inquiry by pupils.

SS 656 (46 minutes): In the lesson on this tape, students try to decide what the third version of "Parents' Dilemma" was simulating. They also suggest non-family situations to which the model in the game might be applied. Pupils then analyze the way in which their behavior changed from the second version to the third version of the game, and they try to account for the changes. Finally they discuss "The Potato Story," which they read before coming to class, and try to decide how well the model of the third game can be applied to the situation described in that story.

SS 656 can be used to provoke thought about:
- *a) reasons for different activities in the lesson;*
- *b) reasons why pupils are asked to try to figure out what the game was simulating rather than being told the situation simulated;*
- *c) the extent to which pupils are able to suggest real life situations which the game might be simulating;*
- *d) the extent to which pupils are able to identify changes which took place in their behavior, between two versions of the game, and the extent to which they are able to explain these changes;*
- *e) the extent to which pupils are able to apply the model in the third version of the game to the situation described in the story which they have read;*
- *f) whether this lesson should be followed by another day of discussion, before turning to the next simulation game in the episode;*
- *g) the kinds of preparation which a teacher must make before either playing a simulation game in class or conducting a discussion following the game;*
- *h) the interaction between the teacher and students and among students; and*
- *i) aspects of the simulation game which may be affecting the discussion pattern.*

SS 656 is best used after viewers have seen tape SS 655 in which pupils are shown playing that version of the simulation game discussed in this lesson.

SS 657 (57 minutes): In the first lesson on this tape, pupils make further comparisons between the models used in the three versions of the simulation game and "The Potato Story." They also discuss applications of the models to real life situations. In the second lesson, they play the first version of the game on "Resources and Arms."

SS 657 should provoke thought about:
- *a) the uses of simulation games;*
- *b) the importance of follow-up questions, as well as a follow-up discussion, after playing simulation games in a class;*

c) *the kinds of preparation which a teacher must make for using simulation games;*
d) *the importance of giving careful directions before playing a simulation game;*
e) *the discussion pattern in this class and the way in which the teacher perceives his role in the discussion;*
f) *the style of questioning used by the teacher and the types of questions used to stimulate different kinds of thought; and*
g) *where these lessons might be placed on a continuum between exposition by the teacher and inquiry by pupils.*

SS 658 (42 minutes): In the lesson shown on this tape, pupils play the last two versions of the game, "Resources and Arms."

Although SS 658 can be used by itself, it would be wiser to use it with other tapes in the episode particularly volume SS 657 which shows the first version of the game on "Resources and Arms," and SS 659 which shows the follow-up discussion for the versions played on this tape. The tape can be used to provoke thought about:
a) *ways in which the episode in the simulation game on "Resources and Arms" can be used in different social studies classes;*
b) *the kinds of preparation which the teacher must make in using simulation games;*
c) *the importance of initial instructions before playing a simulation game;*
d) *the reactions of pupils to simulation games; and*
e) *the importance of follow-up procedures for a simulation game.*

SS 659 (50 minutes): In the lesson shown on this tape, pupils discuss the three versions of the game, "Resources and Arms," and generalize about what they have learned.

SS 659 can be used to provoke thought about:
a) *the value of simulation games;*
b) *the effectiveness of this particular simulation game in achieving the objectives identified for the episode;*
c) *the importance of a follow-up discussion after playing a simulation game;*
d) *the discussion pattern in the class, and the way in which the teacher perceives his role in the discussion;*

e) *the pace at which a teacher should ask questions and make comments;*
f) *the kinds of questions which can be asked to stimulate different kinds of thinking; and*
g) *ways of handling value questions in a class.*

SS 660 (49 minutes): In the lesson on this tape, pupils summarize what they have learned from the entire episode, which included three versions each of the two different simulation games, "Parents' Dilemma" and "Resources and Arms." They look at the conflict situations in terms of a continuum between conflict and cooperation, and relate the game on "Resources and Arms" to the international situation.

SS 660 can be used to provoke thought about:
a) *the length of time which should be spent on a discussion during one lesson;*
b) *the amount of time which should be spent on discussing a simulation game, or a series of simulation games in a number of lessons;*
c) *the extent of interest which pupils have in different parts of the lesson;*
d) *whether or not both simulation games are needed in this episode and the extent to which each seems to contribute to objectives for the episode;*
e) *principles which might be followed in deciding when to probe certain comments in more detail;*
f) *ways of evaluating what pupils have learned from simulation games;*
g) *ways of handling controversial issues in a social studies class;*
h) *the discussion pattern in the class and the role of the teacher in the discussion; and*
i) *questioning techniques.*

This tape should prove helpful if it is used after viewers have seen several of the earlier tapes in the episode.

TOPICAL TAPES

OVERVIEW

This section describes the attempts of various individuals to develop topical tapes by combining short segments from other tapes in the collection. The demand for this kind of material is well-known; however, it is very difficult to extract material in such a way as to have it be meaningful out of context, to avoid leading the viewer into superficial and erroneous appraisals, and to avoid narrowing the use of the content to a single purpose.

Fifteen such tapes are available:

Volume	Subject	Grade(s)	Volumes Used
SS 800	Teaching Map Skills	all levels	SS 014, 020, 024, 619, 625, 626 and 627
SS 801	Evaluating Sources of Information	junior high	SS 204, 205, 208 and 209
SS 802	Evaluating Sources of Information	senior high	SS 635, 636 and 637
SS 803	Recognizing Limitations of Data	all levels	SS 002, 204, 205, 208, 209 and 617
SS 804	Examining Assumptions	junior and senior high	SS 207, 605, 636, 638, 644, 651 and 652
SS 805	Logical Reasoning	senior high	SS 608 and 629
SS 806	Value Judgments	senior high	SS 627 and 636
SS 807	Buzz Groups	junior and senior high	SS 204, 212, 213, 603, 620, 621, 635, 644 and 661
SS 808	Questioning and Discussion Techniques	junior and senior high	SS 214, 601, 625, 648 and 649
SS 809	Evaluation	junior and senior high	SS 214 and 639
SS 810	Inquiry Strategies	elementary	SS 002, 014, 018, 019, 020, 024 and 025
SS 811	Inquiry Strategies	junior and senior high	SS 204, 205, 623, 625, 631 and 663

Volume	Subject	Grade(s)	Volumes Used
SS 812	Simulations and Inquiry Techniques	junior high	SS 219, 220 221 and 622
SS 813	Discussion	junior and senior high	SS 603 and 641
SS 814	Use of cartoons, recordings, oral reports and the overhead	junior and senior high	SS 213, 616 and 641

Volumes SS 800 through 811 were edited by Dr. Edith West of the University of Minnesota. She has prepared a video guide showing the appearance of various segments on the tape and some background notes to accompany each tape.

Volume SS 812 was edited by the staff of the High School Geography Project for use in their workshops. They have prepared the following materials for distribution with the tape:

1. Synopsis of each part of the tape.
2. Class assignments for each part of the tape.
3. Questions for discussion on the tape.
4. Suggestions pertaining to general use of the tape; background information on the class, the teacher, and the context of the lesson; suggestions on preparation for using the tape; and specific suggestions for using the tape in class.
5. Descriptions of materials used by students in the lesson.

The last two tapes, Volumes SS 813 and 814, were edited by Dr. Michael Rockler formerly of Carleton College, now at the University of Nebraska at Omaha. He has prepared a video guide and some suggestions pertaining to the use of the tapes which are provided with the tapes themselves.

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUME SS 800 (56 minutes)

This volume shows a series of sequences in which pupils are using maps. In the first sequence, kindergarten children pour a little water on the mountains shown on a plastic relief map of the United States to find out where the water goes. The second sequence shows a fourth grade class which is studying a unit on India. Pupils examine maps of summer and winter monsoons and rainfall distribution and try to figure out why certain areas receive more rainfall than the others. The next sequence on the tape shows fifth grade pupils who are studying a unit on New York City. Earlier in the lesson, they decided that there could be very few one-family homes on Manhattan Island. They check their guess against a map showing the distribution of one-family homes. The next sequence is from a ninth grade geography class. Pupils read brief descriptions of different types of industries and then examine a series of maps, each of which shows a pattern for a different industry which is not identified on the map. Pupils try to decide which map fits which description. The next sequence shows an eleventh grade class comparing different map patterns of the world to identify things which are associated with each other in the same areas. The final part of the tape shows an eleventh grade class which is beginning its study of the geography of China. Pupils hypothesize about landforms and climate from a map showing only the distribution of rivers.

The last sequence on this tape is not included among the regular tapes; it was recorded in the spring of 1966 at University of Minnesota High School, James R. Olson, teacher.

VOLUME SS 801 (35 minutes)

This tape shows junior high school teachers trying to help pupils learn how to evaluate sources of information. The first sequences are taken from two consecutive lessons in a seventh grade unit on "Intergroup Relations." Pupils have been reading fiction and biographies about minority group members who have faced serious problems of discrimination. In an earlier lesson, the pupils identified types of discrimination which these people faced. In the sequences shown on this tape, the teacher turns to the advantages and disadvantages of fiction and biography as sources of information.

Part Two of the tape shows an eighth grade government class. Pupils are working on a unit of The Executive Process. They have been examining Truman's decision to drop the atom bomb at Hiroshima. In the lesson just prior to the one shown on this tape, the teacher gave pupils an exercise consisting of a number of differing accounts by both newspaper reporters and people involved in helping to make the decision. Pupils were asked to pick out points upon which the accounts agreed and upon which they disagreed. They discuss this exercise in the sequence shown on this tape.

VOLUME SS 802 (48 minutes)

This tape shows a series of sequences from a tenth grade class in United States history. In each sequence, the teacher is focusing upon developing skill in evaluating sources in terms of the bias and competency of authors. All of the sequences are from the same class and from the same unit on the "Civil War and Reconstruction." Pupils analyze both a secondary account and primary accounts of slavery.

VOLUME SS 803 (50 minutes)

This tape shows sequences from both elementary and secondary school classes. In each of the sequences, pupils are considering the incompleteness or the limitations of certain kinds of data. In several of the sequences, the focus is upon sampling procedures and interpretations of sampling studies.

The first sequence on the tape shows a group of first grade children who are studying a unit on "The Japanese Family." The previous day they made a list of guesses about the needs of Japanese families and ways in which the Japanese live. In the sequence on this tape, children check their guesses by examining pictures. The teacher raises questions about what they would know about Japan if they saw only certain pictures.

The next sequences are from a seventh grade class which has been reading biographies and books of fiction about members of minority groups who faced discrimination. The teacher has asked about the advantages and disadvantages of such books as sources of information about race relationships. The second sequence from this class is from the next lesson in which pupils suggest that they might check upon the accuracy of the facts and interpretations in their books by making a questionnaire study. Pupils talk about how they could make such a study and then read an introduction to a sampling study which explains the sample used.

The next sequence shows a twelfth grade class which is studying sociology. Pupils have been analyzing the results of a sociological study, and one pupil has raised a question about whether or not the sociologist would have obtained similar findings if he had studied a different group of people. The tape also includes a sequence from another twelfth grade class which has obtained data from class members and their parents on a social distance scale. The sequences show class members comparing their results with results on a national sample and analyzing reasons for the differences.

The final sequence on the tape shows a group of eighth grade pupils in a class on government. They are discussing an exercise on the decision to drop the bomb at Hiroshima. This exercise includes a number of accounts of the decision, both by newspaper writers and by those who had something to do with making this decision. In the sequence on this tape, pupils identify facts which those on each side of the issue omit from their arguments.

One sequence on this tape is included from a tape which is not used in any of the other volumes included in this catalog; it was recorded in St. Louis Park High School, Ronald L. Allen, teacher.

VOLUME SS 804 (54 minutes)

This tape shows sequences from a number of classes which are dealing with assumptions and inconsistencies. Several of the sequences are from a tenth grade class in United States history, which at the moment, is studying a unit on the "Civil War and Reconstruction." In one sequence, pupils identify the attitudes of white people towards slaves by examining advertisements for runaway slaves. In another sequence, pupils examine the value conflict facing southerners, and in a third sequence, pupils identify assumptions of white people which kept them from understanding how slaves were using Negro spirituals to promote escape via the underground railroad.

Two sequences on the tape are from a twelfth grade class which is studying a unit on "War and Peace." In one, pupils examine political cartoons, identify the assumptions expressed in the cartoons, and examine the relationship of these assumptions to possible solutions for war. In the other, pupils take a brief attitude test and then examine the inconsistencies in their attitudes.

The tape also includes sequences from two twelfth grade classes which are studying an experimental sociology course. In both, teachers are examining the assumptions of the author of a sociological study and are challenging the usefulness of the indicators used to test the hypotheses in the studies.

A sequence from an eleventh grade area studies class shows pupils examining statements from a study of the image of China held by a sample of American leaders. Pupils identify contradictory images.

The final sequence on the tape shows an eighth grade class which is looking at pictures in a textbook on the unwritten constitution. Although the teacher had not planned to work on the skill of identifying inconsistencies, he finds an opportunity to do so during a discussion of constitutions and the unwritten constitution in the United States.

One sequence is from a tape which had not been used in other volumes in this catalog; it was recorded at St. Louis Park High School, Ronald L. Allen, teacher.

VOLUME SS 805 (48 minutes)

This volume shows sequences from two different classes in which the teacher had the opportunity to help pupils learn more about logical reasoning. The first sequence is from a twelfth grade sociology class in which students are learning how to build new hypotheses from previously-established propositions. Pupils argue about whether or not dependent variables will be related, because both are caused by the same independent variable.

The second sequence is from an eleventh grade class in geography. Pupils have been discussing the relationship between manufacturing and population. Somebody has suggested that manufacturing would be found in areas of heavy population. He argues that agriculture is related to skilled workers; that skilled workers are related to manufacturing; and, therefore, agriculture is related to manufacturing. In this sequence, the teacher does not have pupils examine the logic of the argument, although in another lesson pupils check the relationship between agricultural production and manufacturing by looking at maps. However, the sequence can be used to stimulate a discussion about how the teacher might have helped pupils analyze the argument.

VOLUME SS 806 (26 minutes)

This volume includes sequences from two different classes. In both, the problem of value judgments arises and the teacher asks students to define terms operationally, without using that terminology.

The first sequence is from a tenth grade class in United States history. Pupils are studying conditions of slavery. One of the questions which they are considering is whether or not slaves were treated badly. The teacher asks pupils to identify the factors which should be considered in trying to define "bad" treatment. This sequence can be used to provoke thought about the problems of defining other terms which pupils use, such as "poor" shelter, working "too hard" and so on.

The second sequence on the tape is from an eleventh grade class which is studying geography. The teacher has asked students to use two maps to identify areas of the world in which hunger is associated with a rapidly growing population. Pupils are having a hard time because they are interpreting the term "rapidly growing" differently. Pupils finally define the term by looking at the rate of growth for the world population as a whole, and then selecting a growth rate as a cutoff point between average growth and rapid growth. Later, during the same lesson, the teacher asks pupils to identify other factors related to hunger. One pupil suggests that living conditions aren't as good. The teacher asks what he means by that, and pupils start making a number of other value judgments. The teacher uses this lesson to help pupils see the difference between value judgments and objective criteria and, finally, to get pupils to identify specific things which might be used in making judgments about differences in living conditions.

The tape should provoke considerable discussion about ways in which viewers would have handled the comments by pupils and other ways in which they might have helped pupils define terms operationally.

VOLUME SS 807 (61 minutes)

This tape shows sequences from a number of junior and senior high school classes in which the teacher is using buzz groups. These groups are used for different purposes. Some groups are discussing questions which will be discussed later by the entire class. In one, pupils review what they have learned in a previous lesson as a preliminary to a class discussion. In another, class pupils are identifying questions which they wish to study in the unit.

The pupils in one class listen to two teachers present the arguments of two opposing lawyers in a legal case, and then assume the roles of judges and try to reach a decision in the case. In another class, pupils identify sources of information which might be used to check on the accuracy of books which they have been reading. In still another, pupils in each group make a flow chart of goods moving in and out of a factory which they select.

Finally, the teacher in one class asks groups to study an archeological site map and draw inferences from it. The teachers use different ways of dividing the class into groups. Teachers also differ in the ways in which they give directions for what groups are to do. The groups vary in size from only two pupils to fairly large groups. These sequences also illustrate different ways of making use of the work of buzz groups, including reports by recorders, presentation of a chart, and discussion of certain questions.

VOLUME SS 808 (54 minutes)

This volume shows sequences from five different classes in which the teachers are using some form of recitation or discussion. The sequences provide contrasts, not only among different teachers and classes, but also from one part of a lesson to another, or from one lesson to another within the same class. Teachers differ in the kinds of questions which they ask, in the way in which they encourage pupils to speak, and in the extent to which they make comments. Some generalize for pupils, while others present provocative statements to stimulate thought and discussion. The sequences on the tape are lengthy enough to provide some context for analysis. Moreover, each sequence is introduced by a brief announcement which provides a setting for the sequence.

Two of the sequences are from lessons which have not been included on other tapes in this catalog; they were recorded at St. Louis Park High School, Ronald L. Allen, teacher and at Niles Township High School, Galen R. Hosler, teacher.

VOLUME SS 809 (38 minutes)

This tape shows parts of four different classes in which teachers are using some kind of evaluation device. In the first sequence, the teacher has pupils correct papers of other members of the same class. Students then argue about the answers to some of the questions. *The first sequence should provoke thought about the pros and cons of having pupils correct papers of other members of their own class.*

The second sequence also shows pupils raising questions about the answers to a test which they took several days ago. The two teachers differ considerably in their style of handling questions.

The last two sequences on the tape show very different types of evaluation. The first of these is from a tenth grade United States history class which has been studying slavery. The teacher presents data on the conditions of factory workers in the same period. Pupils are to work in couples, and to compare the life of the slaves and the life of the factory workers. Each couple is to write a paragraph or two explaining why they would have preferred to be either slaves or factory workers.

The last sequence on the tape is in an eighth grade class on government. Pupils have been studying a unit on "The Executive Process." They have used a number of case studies which have provided data to help them generalize about factors affecting decision making. At the end of the unit, the teacher gives pupils a worksheet which lists a series of concepts. Pupils are asked to develop generalizations relating some of the concepts on this sheet.

The sequences from the first two classes on this tape do not appear in any other volumes listed in this catalog. They were recorded at St. Louis Park High School, Ronald L. Allen, teacher.

VOLUME SS 810 (59 minutes)

This volume shows a series of sequences illustrating inquiry strategies of teaching at the elementary school level. In the first sequence, kindergarten children pour water on the mountains on a plastic relief map to find out what happens to the water.

In the second sequence, first grade children hypothesize about the Japanese people and then test their hypotheses against pictures.

The next sequence shows third grade children who are studying a unit on the Manus. They examine slides of Manus homes and then hypothesize about materials which might be used in building these homes.

The next sequence is of a fourth grade class which is studying a unit on India. As they examine a rainfall map of India, they try to explain possible reasons for the rainfall distribution pattern.

The last sequence is from a fifth grade class which is studying a geographic case study of New York City. Pupils have studied New York in different eras. In this sequence, they hypothesize about changes which have probably taken place since the mid-nineteenth century, the era which they looked at last. They then examine a series of pictures of New York to try to decide whether they were correct or not. The last part of the tape shows this same group of fifth grade children hypothesizing about problems which may face New York City.

This tape should prove useful in provoking thought about inquiry strategies of teaching, and where each of the lessons shown might fall on a continuum between exposition by the teacher and inquiry by pupils. The tape can also be used to stimulate a discussion of questioning procedures within an inquiry strategy, about kinds of materials of instruction which can be used both in stimulating hypotheses and in testing hypotheses, and other words which might be substituted for the word "prove" when talking about hypotheses.

VOLUME SS 811 (53 minutes)

This volume includes a number of sequences from junior and senior high school classes in which teachers are using inquiry strategies of teaching. The sequences have been selected to show differences in teaching style, differences in types of things inquired about, differences in types of materials or experiences used to stimulate inquiry, and differences in the placement of the lessons on a continuum between inquiry by pupils and exposition by the teacher.

In one sequence, pupils have studied two maps--one of hunger and one of population density to identify places in the world in which a dense population is associated with hunger. The teacher then asks them to hypothesize about other things which might be found in association with high population density and a poor diet.

In another sequence, this same class is generalizing on the basis of its experiences in playing a simulation Game of Farming.

Another sequence shows a culminating activity after pupils have assumed roles of various members of a company's management team, and decided in which of 25 cities to locate a new metal fabricating plant. The "President" reports her company's decision. Later pupils generalize about what they have learned from this role-playing experience.

A sequence from a twelfth grade class shows pupils studying an anthropology unit and speculating about models of two stones, which the teacher passes around the class. They begin by trying to decide what these stones were. After having identified them as tools, they try to decide which one was the older.

The final sequences are taken from a seventh grade sociology class. Pupils identify some of the limitations of biographies and books of fiction which they have read about minority group problems, and they suggest other sources of information which might be used to gather information to check on the accuracy of the book which they have been reading.

VOLUME SS 812 (60 minutes)

This tape is divided into four parts which illustrate educational simulations and inquiry techniques in the classroom. The classroom activities shown are from the High School Geography Project's course, Geography in an Urban Age.

The entire tape is intended for use with the teacher education materials developed by the High School Geography Project. The three kits are: Using Simulation to Involve Students, Using Media to Stimulate Inquiry, and Using Evaluation to Improve Instruction.

The tape should also prove useful in undergraduate courses in social studies or geography methods, in graduate courses dealing with instructional procedures or curriculum development, and in in-service programs and workshops for social studies teachers.

A brief description of each part of the tape follows:

Part I and Part II of the tape are excerpts from the role-playing simulation, "Location of the Metfab Company," contained in the Manufacturing and Agriculture unit of the HSGP course. The sequences show two different teachers using the activity in their classes. *These two parts of the tape would be useful in illustrating the way a role-playing simulation is set up and carried out in the classroom. The segments also demonstrate the variations in the management of the simulation by the two teachers.*

Part III shows sequences from the "Portsville" activity from the Geography of Cities unit. In this simulation students build a hypothetical U.S. city as they think it would have developed in the 1850's. Construction of the city is carried out on a Modulex board using tiny color-coded guiding pieces to represent different land uses. An historical reading and photographs about the city help students reconstruct the time period.

Part III of the tape could be used along with Part I and Part II to compare and contrast the different ways that simulation activities are constructed and employed. The "Portsville" activity demonstrates the use of tactile materials in the classroom.

Part IV shows segments of the "New Orleans" activity from the Geography of Cities unit. In this activity, students work with a wide range of media to form hypotheses about the physical and socio-economic characteristics of three neighborhoods from information derived from topographic maps, aerial photographs, and slides. The students then verify their hypotheses about the neighborhoods by examining census tract data.

Part IV of the tape would aid a discussion of the advantages and disadvantages of using varied media in the classroom. The sequence also points out the role of a teacher and students in an inquiry lesson.

VOLUME SS 813 (45 minutes)

This tape contains four sequences, each taken from a different class, which focus upon the use of discussion as a teaching-learning activity.

In Part I, twelfth grade students are studying materials prepared by the Anthropology Curriculum Study Project; the teacher has been talking about peasant life in China. Part II shows another twelfth grade class and teacher; they have been participating in buzz groups discussing adolescent conflict in connection with materials prepared by the Sociological Resoures for the Social Studies Project. They are now ready to discuss their findings as a class.

Part III shows a discussion by a group of eleventh grade students who have been studying U. S. foreign policy as related to a unit prepared by Minnesota Project Social Studies. In Part IV, ninth grade students try to match descriptive paragraphs to maps which show distributions of industry; materials being used were prepared by the High School Geography Project.

SS 813 can be used to compare and contrast a variety of approaches to discussion activity.

VOLUME SS 814 (46 minutes)

This tape contains five sequences taken from five different social studies classes, which feature different kinds of teaching-learning activities.

The first sequence shows an eleventh grade class which is learning to interpret editorial cartoons. This is followed by a tenth grade class which is using a recording in its study of Elkins Theory of Slavery. The third sequence shows a student giving an oral report to her twelfth grade classmates on the C.C.C.

The fourth part of this tape pictures the students in an eighth grade class who are role-playing a White Citizens Council in conjunction with their study of the Little Rock crisis. The final sequence is of a twelfth grade class which is using a tape recording in their study of race relations.

SS 814 can be used to illustrate the use of a variety of activities in the classroom.

FOUNDATIONS OF EDUCATION

OVERVIEW

The following twenty-seven tapes were prepared especially for use in courses concerned with the sociological, psychological or philosophical foundations of education:

Volumes	Subject	Grade	Teacher	Location of School
FE 810-818	Inner-city education; underachievers in mathematics	7	Mr. C. W. Holtzman, Jr.	Minneapolis, Minnesota
FE 820-825	Inner-city education; underachievers in mathematics	7	Mr. Winfred D. Ferrell	Grand Rapids, Michigan
FE 826-833	Inner-city education; underachievers in mathematics	8	Mr. Winfred D. Ferrell	Grand Rapids, Michigan
FE 834-835	Inner-city education; underachievers in mathematics	8	Mr. Earl E. Orf	Minneapolis, Minnesota
FE 840-841	Montessori education	(ages 3-7)	Miss Doris Perera	Edina, Minn. (suburban)

The first three series listed, FE 810-818, FE 820-825 and FE 826-833, provide raw, unedited data for in-depth analyses of topics pertaining to sociological, psychological and philosophical aspects of inner-city education. Each volume, unless otherwise indicated, shows an entire class period. Even the first few days of taping, which are generally considered warm-up times to permit the students and teacher to become accustomed to the cameras, have been made available because the responses of these students to the equipment is interesting in itself. All of the tapes were recorded in the fall of 1968.

Any of these tapes could be used individually, but are more useful as a series in which viewers can observe the behavior of students from day to day, to assess progress, and to become aware of individual differences among the students.

Given the time involved in viewing an entire series, they might best be used as a basis for an out-of-class assignment. Illustrative topics for analysis are: (a) the role of the teacher and the educational philosophy reflected in his behavior; (b) the ability and motivational level of individual students and the way they respond to a variety of classroom situations; (c) the teaching methodology and pace employed by the teacher; (d) the students' response to the mathematical materials with which they are working; (e) factors which cause the disruptive behavior of some of the students; and (f) unique aspects of classroom organization in inner-city schools.

Although viewers could be given individual assignments, it would be highly desirable for them to view the tapes in small groups and to stop for discussion as provocative events occur on the tape. They should try to anticipate what they think the teacher might do next, and how the students will respond, or conversely, what the students might do next, and how the teacher will respond.

All of these tapes were made originally to show the use of mathematics materials prepared by the University of Illinois Committee on School Mathematics for underachievers; however, they appear to be more useful in discussing problems of inner-city education than for instruction in the teaching of mathematics. This is not to say that they cannot serve a dual purpose. The materials being used by the classes are available from Harper & Row.

Recognizing that viewing one entire series may strain the user's resources of time, money and machines, the suggestion that much could be learned from comparing and contrasting different series is carefully made. There are distinct differences between these three classroom situations which may or may not be attributable to two obvious variables: the composition of the class and the race of the teacher. The first series shows a class of mixed racial composition taught by a white teacher, the second an all black class taught by a black teacher, and the third a predominantly black class taught by the same black teacher. To provide an even further dimension, the series FE 834-835 is offered, because it features a predominantly white inner-city class taught by a white teacher who is using the same mathematics materials for underachievers.

Suggestions for use, including illustrative questions for discussion, have been prepared for distribution with all tapes in these four series with the exception of FE 826-833. None were prepared in this instance, because they seemed only to repeat those suggested for the other volumes.

The last series of tapes prepared especially for foundations courses, FE 840-841, was made in cooperation with the Edina Montessori School in Edina, Minnesota. The material was recorded in the spring of 1967. The teacher is a native of Ceylon, trained in the Montessori method in London. These tapes differ from all others in the collection, in that Mrs. Judith Reichel Brandt, from the Edina Montessori School, (trained in Washington, D. C. and in Bergamo, Italy) serves as a narrator and provides a running commentary describing and explaining the activities carried on by the children and the class. The tapes could be used singly, or as a series, to provide concrete illustrations of ways Montessori principles and activities are carried out in a classroom.

Written supplementary materials provided with Volumes FE 840-841, include a guide for locating important events on the tape and some background information relating to the content of the tapes.

VOLUME FE 810 - FE 818

This seventh-grade class is studying Chapter 1, of Stretchers and Shrinkers Book 1; materials prepared by the University of Illinois Committee on School Mathematics for underachievers in mathematics.

FE 810 (51 minutes): The teacher explains the presence of the cameras and then proceeds to take roll. Since the class takes place during the first week of the school year, he explains something of his philosophy of seating arrangements and spends time learning students' names. He introduces the "Stretchers and Shrinkers" materials, and students begin work in the text booklet.

FE 811 (42 minutes): Again, the teacher uses a considerable portion of the period in taking roll; he asks the class to go back to page 1, for the benefit of those students who were absent the first day. The noise level in the room is very high, most of it attributable to the students, some to the traffic nearby. The last part of the period is spent on a puzzle taken from the Activities Handbook which accompanies the text booklet.

FE 812 (60 minutes): The teacher tries to introduce a game, called "make a hundred," which is given in the Activities Handbook. The class is very uncooperative and, for the most part, the period is spent in activities related to classroom organization and control.

FE 813 (60 minutes): Again, a great deal of time is consumed in taking roll. Students ask to go to their lockers to get forgotten materials; others are moving around the room exchanging seats. The teacher asks them to work through page 16 of the text booklet, and the rest of the period is spent in supervised study. The tape shows close-ups of individual help given by the teacher.

FE 814 (60 minutes): This tape represents the fifth day of work with the "Stretchers and Shrinkers" materials. The teacher conducts an activity, suggested in the Activities Handbook, dealing with a comparison of lengths of sticks, and then moves to a second activity designed to help students get acquainted with the new machines and to develop skill with three-dimensional drawings.

FE 815 (60 minutes): The teacher conducts a review activity prior to giving the first quiz related to the material in Chapter 1. As on previous days, a number of students exhibit behavior which is disruptive to the achievement of the teacher's goals.

FE 816 (59 minutes): Most of the period is devoted to going over the exercises students have completed in the text booklet. Disruptive influences continue.

FE 817 (60 minutes): The class continues to check its work on the first chapter in the text booklet. Problems of classroom organization are very much in evidence.

FE 818 (59 minutes): The teacher uses the first half hour to have those students who have not yet finished Chapter 1 do so (he gives those who have finished a puzzle to solve). Then he gives the second quiz related to the chapter. After most have finished the test, he asks them for some reaction to the work they have done thus far. *This tape, along with the two preceding it, is especially useful in analyzing attitudes and responses of certain individuals in the class.*

VOLUME FE 820 - FE 825

The 7th grade class, shown in this series, is using materials for underachievers in mathematics, prepared by the University of Illinois Committee on School Mathematics, called "Stretchers and Shrinkers."

FE 820 (51 minutes): In this tape, the students begin their study of Chapter 4, Stretchers and Shrinkers: Book I. *Viewing the tape provides an initial acquaintance with the students and teacher, with the UICSM materials, and with the students achievement in mathematics.*

FE 821 (49 minutes): On this day, (following the one shown in FE 820) the students work pages 85, 86 and 87 in the text and do several related activities described in the Activities Handbook. Each time the students are asked to do a section by themselves, the teacher goes about the room giving individual help. *The class is noisy and the effects of the presence of the taping equipment are readily apparent. Nevertheless, the tape provides valuable additional information about the behavior of this particular class.*

FE 822 (57 minutes): This tape shows portions of the next two class periods. In Part I, the class goes over pages 87-92, which had been assigned as homework, and does several related activities suggested in the Activities Handbook. Part II shows the first few minutes of class the following day, when the teacher has special problems in getting the class settled and ready for work.

FE 823 (51 minutes): Students use the first part of the period to finish an exercise begun the day before, then the teacher gives another assignment and gives individual help to students as they use the rest of the period for supervised study. *The tape provides excellent opportunities to gain information about the problems and progress of individuals in the class.*

FE 824 (51 minutes): Although the sound quality is inferior to the other tapes, and many comments are unintelligible, the value of the content in gaining further insights into the nature of the class is believed to compensate for the added effort required to view it. During the first part of the period, students correct their answers to problems on pages 99 through 101; then they take a quiz. *The tape provides opportunities to view the students while taking a quiz, to view teacher and students' responses to a "fight" which breaks out in the class, and to listen in on a conversation between the teacher and someone from the office who wants him to admit a transfer student who has no educational record with him to his algebra class.*

FE 825 (55 minutes): This tape shows portions of two class periods, the first one being held the day after the one shown in FE 824. Part I shows the class as it begins its discussion of page 109 in the text, which is to lay a foundation for prime factorization. Part II shows the first part of the next day's class, to the point where they finish page 117 in the text and do an activity designed to reinforce and review the idea of prime number and prime factorization. *Viewers have an opportunity to observe the extent to which the students appear to have grasped the idea.*

VOLUMES FE 826 - FE 833

The class shown in this series is taught by the same teacher as the one featured in FE 820-825; students are studying Motion Geometry: Book I, materials prepared by the UICSM for underachievers in mathematics. Progress is slow; the class is a difficult one to organize for productive work. It is quite unlike the classes shown in the other two series, perhaps most unlike the other class taught by this same teacher; therefore, it could be used very profitably in conjunction with FE 820-825 to provide an opportunity to discuss the extent to which a teacher influences the behavior of a given class of students.

FE 826 (51 minutes): This tape provides an introduction to the class. Students are very noisy and obviously influenced by the presence of the taping equipment. They do settle down while the teacher reviews the three motions they've learned so far: slides, flips and turns. He then asks them to do pages 72 to 82 in the text and goes around the room giving individual help.

FE 827 (48 minutes): The teacher announces at the beginning of the hour that students are to finish the pages assigned the previous day, and that the last half hour will be used for the test covering Chapter 2. However, many students need help and it becomes apparent to the teacher that they are not ready to take the test; hence he postpones it to the following day. *The most rewarding parts of the tape are those which show the interaction between students and teacher as he goes about giving individual help.*

FE 828 (48 minutes): The teacher gives the test he promised. There is a great deal of confusion and conversation about the material and considerable extraneous activity. After everyone has finished the test, the teacher tries to discuss it but has difficulty in getting their attention. At the end of the hour, he tells them they will finish going over the test tomorrow.

FE 829 (51 minutes): The teacher tries to pick up the discussion of the test items; the students are seemingly more interested in finding out what their grades are. One student wants additional credit because one of his right answers was marked wrong, but the teacher says that the right answer is written in ink of a different color and he believes the student just changed his answer. The class is interrupted, when three boys walk into the room demanding that one of the students in the class come out because they have something to settle with him. The teacher finds himself between these three boys and the boy they've come for and his friend; he refuses to let the boys come into his class. When this problem is resolved, at least from the teacher's point of view, approximately half of the class period has been used up. The rest of the time is spent working on pages 86 and 87.

FE 830 (49 minutes): The teacher picks up the work on page 87, where the class left off the preceding Friday. The students seem somewhat more quiet today, perhaps because it's Monday. After they finish discussing page 88, the teacher asks the students to work through page 91, and then gives individual help.

FE 831 (50 minutes): The teacher asks students to work on some arithmetic worksheets, which they appear to do with somewhat more diligence than usual. The individual help sessions give further insight into the ability and achievement of these students.

FE 832 (46 minutes): As the class period begins, students complain about the lack of heat in the room; then they complain about having to do the arithmetic worksheets and want to know how many more they have to do. One girl proves to be especially difficult. Again the teacher and the student teacher give individual help to students during the supervised study period.

FE 833 (48 minutes): The teacher returns to work in the text. He begins with an activity designed to lead into the problems on page 90, and then they do page 90. Periods of demonstration and explanation alternate with the teacher's giving individual help.

VOLUMES FE 834 and FE 835

This series of two tapes, recorded in an inner-city, eighth-grade math class, is offered for use in foundations of education courses for comparison and contrast with FE 810-818, 820-825 and 826-833. Students are studying Motion Geometry: Book I, materials prepared by the University of Illinois Committee on School Mathematics for underachievers in mathematics. The excerpts, included in these tapes, begin on the day the class is assigned pages 72-80, the first activity shown in the FE 826-833 series; thus, viewers have a chance to compare the use of the same material in two different situations. The tapes contain excerpts from three different class periods.

FE 834 (41 minutes): The teacher assigns pages 72-80 in the text. The supervised study with individual help given by the teacher parallels the activity with another teacher and class shown in FE 826.

FE 835 (57 minutes): In Part I, the class is shown the following day. The teacher goes over the record posted on the bulletin board, to remind students of make-up which is to be done. Students work on their assignments, receiving individual help from the teacher. In Part II, the teacher first gives a practice test and then the one that will count.

VOLUMES FE 840 - FE 841

These tapes were made to show the conduct of Montessori activities and application of Montessori educational principles in the classroom. They differ from all other tapes in the collection in that there is a running commentary describing the activities of the children and providing a rationale for procedures employed. Both tapes are unedited to show events as they occurred.

FE 840 (60 minutes): This tape was made during a morning session attended by approximately thirty children, ranging in age from 3 to 7. They use a variety of Montessori materials and activities including: (a) work with cylinders with knobs; (b) cutting out geometrical designs; (c) work with puzzle maps; (d) sorting beads into bowls; (e) work with a box of grammar symbols; (f) matching shells; (g) experimenting with an electrical bell system; (h) work with solid geometrical forms; and (i) experiences involving "practical life" skills. As the tape ends, the children are preparing for their juice and cookie break.

FE 841 (60 minutes): This tape shows fifteen of the older children from the morning's session who were invited to stay for the afternoon, because they had demonstrated sufficient maturity to benefit from continued work. Because the group is smaller, there are more opportunities for the teacher to work individually with the children. There also appear to be fewer disruptions, because the younger children, who are just in the beginning phases of learning Montessori expectations, are absent. Some of the activities which can be observed are: (a) multiplication and subtraction with bead bars; (b) study of reading workbooks; (c) use of cards to learn about numbers and the decimal system; (d) building words with a movable alphabet; and (e) arranging bells according to pitch.

Both FE 840 and 841 would be valuable aids in discussing the Montessori approach to the education of young children. The first volume shows numerous examples of the teacher's need to control the behavior of individual children and conveys a sense of the importance of structure and discipline in the Montessori system. The second conveys a sense of the independence and freedom children have in the Montessori classroom, once they have learned certain basic behavior patterns.

In addition to the tapes just described, there are many others, listed elsewhere in the catalog, which would be useful in foundations of education courses. Just as every course and curriculum reflects basic assumptions about what constitutes appropriate educational content, about the needs and nature of learners, so every tape provides discussable information about these issues. Clues to tapes which might be especially useful can be found in checking the "overviews" for other sections.

GENERAL METHODS

OVERVIEW

Whereas all of the tapes described in this document could be useful in considering topics of a "general methods" nature, there are eight which are interdisciplinary and not listed elsewhere:

Volume(s)	Subject	Grade	Teacher(s)
GM 803	Flexible, modular scheduling	8	Mrs. Linda R. Blaisdell Mrs. Marie Cross Mr. R. W. Cuthbertson Mr. Dale Karels Mr. Ken Layden Mr. Richard Neitzke Mr. L. R. Palmer, Principal Mr. Earle Solomonson Mr. Roger Wangen
GM 805-806	First day of School (Secondary)	high school	Mrs. Janet Campbell Mr. William Kulawske Mr. David W. Linné Mr. John R. Loegering
GM 810-814	First day of School (Elementary)	3	Mrs. Pat Schouweiler

Volume GM 803 was recorded in February of 1969 in Minnetonka East Junior High, Minnetonka, Minnesota. It shows planning sessions of teams of teachers as they determine the programs of their students during the next few weeks.

Volumes GM 805-806 feature first-day-of-class activities for four different high school classes. The material was recorded during the fall of 1968 in the St. Louis Park High School, St. Louis Park, Minnesota, a suburb of Minneapolis.

Volumes GM 810-814 feature first-day-of-class activities for a class of third graders attending Eugene Field Elementary School, which is considered an inner-city school in Minneapolis, Minnesota. They were recorded in September of 1969.

These tapes are described in greater detail later in this section. Written, supplementary materials included with each of them include:

1. Guide for locating important events on the tape.
2. Background information providing a context for the tape.
3. Suggested uses of the tape, including illustrative discussion questions.

In order to facilitate the use of tapes listed in other sections of the catalog by persons interested primarily in general methods, a few references are provided below. The list is by no means complete; in most instances, the tapes cited are merely illustrative examples.

AUDIO-VISUAL AIDS - ML 001 (variety); SS 015-017 (pictures and models) SS 018-019 (slides); SS 220 (variety) SS 221 (models); SS 612-613 (films); SS 634 (recording and slides); SS 649 (records) and SS 663 (filmstrip). The use of the overhead is so common in the tapes that the user is referred to descriptions in the subject area and grade level of interest.

CARTOONS - SS 641; SS 650; SS 652

CASE STUDIES - SS 008; SS 024-026; SS 208-209; SS 211-215

CLASSROOM ORGANIZATION AND CONTROL - S 013-014; S 532-533; SS 645; tapes listed in the section relating to Foundations of Education. In effect, every tape represents a case study in classroom organization and control; therefore, the user is referred to individual tape descriptions in a subject area and grade level of interest.

DISCUSSION - SS 008; SS 011; SS 018-019; SS 022; SS 619-620; SS 626; SS 647 and many others.

DRAMATIC PLAY - SS 009

FLEXIBLE SCHEDULING - S 210; SS 201-202; SS 211-215

GROUP WORK - SS 006; SS 008; S 023; S 050; S 055; SS 204; SS 221; S 531; SS 622-623; SS 625; ML 830-832 and many others.

INDIVIDUALIZED INSTRUCTION - SS 005; S 056; S 211; S 531; E 701; ML 833

INQUIRY - SS 001-002; SS 010; SS 018; SS 024; S 030; S 050; SS 200; SS 203-205; S 520; S 525; SS 627; SS 661 and many others. References to subject areas and desired grade level is recommended.

INTERACTION ANALYSIS - SS 020; S 050; SS 641 and the many other tapes described as being unedited.

LESSON PLANNING - S 050; SS 647 and many others.

OPEN CLASSROOM - SS 201-202; SS 211-215

ORAL REPORTS - SS 207; SS 624; SS 628

OUTSIDE SPEAKERS - SS 621

QUESTIONING TECHNIQUES - S 040-041; S 080-081; SS 015-017; SS 634 and many others.

ROLE PLAYING - SS 211-215; SS 622-623

SIMULATION GAMES - SS 221; SS 631-633; SS 653-660

TALENTED STUDENTS - M 200; S 520-524 and others.

TEAM TEACHING - SS 201-202; SS 211-215

UNDERACHIEVERS - S 530-535; also tapes described in the Foundations of Education section.

UNIT PLANNING - SS 206; S 510-514; SS 634; SS 638; SS 643; SS 647

VALUES AND CONTROVERSIAL ISSUES - SS 642; SS 650; SS 652; SS 667

DESCRIPTIONS OF INDIVIDUAL TAPES

VOLUME GM 803 (58 minutes)

This tape is in two parts. Part I focuses upon a highly flexible scheduling program in a junior high school. One of the planning teams in this school is made up of social studies teachers, science teachers, and representatives from home economics, shop and art. The principal of the school and a number of the teachers on this team meet as a group to talk about the scheduling program. They discuss the way in which this particular team began to work together and ways in which they plan the use of the time which they have available each week. Then the team actually plans the schedule for the next several weeks. Members of the team discuss the advantages which they see in this kind of flexible scheduling which permits changes in scheduling every week. The principal emphasizes the fact that the schedule is developed to fit curricular needs. The program is not one in which teachers must adjust the curriculum or instructional procedures to some set sequence of large and small classes set for the year by a computer.

Part II of this tape shows a team of eighth grade social studies teachers planning the first two weeks of their next unit. The teachers are using a resource unit. They decide which activities they will use and how they will use them. Only part of this planning session can be shown on the tape.

GM 803 can be used to illustrate a type of flexible scheduling which is quite different from many types of modular scheduling; ways in which a team of teachers work with a flexible scheduling program; and the way in which a team of teachers work together on a unit. The tape can also be used to stimulate a discussion of: the pros and cons of flexible scheduling; the ways of using a resource unit to develop a teaching unit; and, the pros and cons of team teaching within a flexible scheduling arrangement.

VOLUMES GM 805 - GM 806

These tapes show the essential portions of the first day of class for four different high school classes. They were produced to show prospective teachers how four different teachers approach the first meeting with a class, how they go about establishing a particular classroom atmosphere and what kind of image they project to their students.

> GM 805 (60 minutes): The first part of the tape features a Spanish I class; the second a French IV class (this repeats part of ML 561). The advanced class is conducted primarily in English so lack of knowledge of the language does not handicap the viewer.
>
> GM 806 (60 minutes): The first class shown on this tape is a twelfth grade humanities group; the second, a twelfth grade English class.

Volumes GM 805 and GM 806 can be used to give pre-service teachers an opportunity to observe and identify teacher behaviors such as those which are limit-setting and/or those which have either a positive or negative effect upon the motivation of students. They can also attempt to identify specific events which contribute to the kind of image a teacher conveys and to speculate as to the extent to which these are conscious or subconscious efforts on the part of the teacher.

GM 805 and GM 806 can be used individually or in a series. Viewing all four of the teachers gives greater opportunities to compare and contrast teaching styles.

VOLUMES GM 810 - GM 814

This series of tapes was made to show prospective teachers how one elementary teacher approaches her first day with a new group of pupils, how she goes about establishing a particular classroom atmosphere, setting expectations, getting to know her students and letting them get to know her. *The tapes are relatively unedited to give the viewer an opportunity to observe the pace and continuity of activities.*

> GM 810 (60 minutes): As the first sequence on this tape begins, children continue to arrive at school, some with their parents, some alone. The teacher gets them settled, tells them about materials in the classroom with which they will work and starts them working on a puzzle.

GM 811 (60 minutes): This tape begins where GM 810 ends. Students are sitting on the floor, ready to hear a story about "Giggles." During the time shown, the teacher continues to give information about expected behavior and tries to inhibit that which is unacceptable. She asks pupils to make calendars for the month of September; then begins calling small groups of children to the front of the room to obtain reading samples.

GM 812 (60 minutes): This tape begins during the third hour of the day, about twenty-five minutes after their morning recess. Half-way through, the class breaks for lunch. The teacher continues her work with the small reading groups in the first part of the tape. After lunch they have a music session. Throughout, the teacher's need to control the behavior of certain individual students continues.

GM 813 (60 minutes): The first part of this tape shows a continuation of the music session. Then pupils continue to work on the assignments given in the morning and the teacher resumes her work with the small reading groups.

GM 814 (60 minutes): This tape shows the last hour of the day and ends when most of the children go home. A few have been asked by the teacher to stay because of their unacceptable behavior during the day. No new activities are introduced; pupils continue work on assignments; the teacher calls the last reading group.

EQUIPMENT USED IN PRODUCING THE TAPES

The mobile unit used for recording consists of a Chevrolet camper as modified by the Scandia Corporation of Minneapolis, Minnesota. All of the electronic equipment excepting the recorders is mounted in a forty-inch wide console which rests on castors for mobility outside the truck when desired, but is bolted to the floor of the van when installed there. The original electronic equipment was designed by the K & M Electronics Company of Minneapolis, Minnesota. Significant modifications have been made since that time by Mr. Weldon I. Hogie, the Technical Director of the Video Tape Project.

Three remotely controlled cameras (DAGE RGS 11's with Zoomar lenses) and eight microphones (originally Electro Voice #676 and #668, and now Sony ECM-50) are normally placed in the classroom. The instructor wears a wireless microphone (Vega). Each of the three camera cables, a nine-pair audio cable, and a power cable can be extended to a length of 300 feet from the van. These are generally run from the mobile unit to the recording classroom by going through the windows of the school. No attempt has been made to disguise the equipment in the classroom.

A VTR-660B (Ampex, two-inch recorder) and a VTR-7500 (Ampex, one-inch recorder) are used for simultaneous recording. Thus, the one-inch tape can be left with the teacher for his viewing and the two-inch tape, which becomes the master tape, can be safely stored in the studio.

During recording sessions, the equipment is operated by two persons. One person is responsible for the cameras and switching; the other is responsible for sound levels. Sound has been the greatest technical problem faced by the Project and this part of the system has now been rebuilt four times. Currently, all microphones are operated individually. The engineer must determine the location of the speaker in the room and open the appropriate microphone as rapidly as possible. Cameramen must possess special qualifications and training because operating cameras by remote control, without a script to give warning of what happens next, requires a person who is not only technically knowledgeable but also one who has good reflexes and the ability to anticipate what may happen before it actually does. These difficulties explain the fact that there are occasional lags between the teacher's calling on a student and the camera's finding the student who is talking. Of course, the audio engineer cannot find the speaker until the cameraman does, so this becomes a very crucial part of the recording operation.

No doubt the technical quality of the tapes could be greatly improved if there were no objection to resorting to certain practices common in many efforts to produce tapes in a classroom setting, e.g. asking students to wear tennis shoes, putting carpeting in the aisles, taking pencils and paper away from students, or simply having classes meet in rooms outfitted as studios with favorable lighting and acoustical conditions. The Project has avoided these practices because of its desire to leave the natural habitat of students and teachers as unchanged as possible. Therefore, it has had to accept poorer technical quality than would otherwise be possible. The more recent recordings have, in most instances, better technical quality than those produced during the earlier stages of the Project.

The tapes which are distributed are actually dubbed copies of dubs. As was stated earlier, the master tape is recorded on a two-inch Ampex machine. The edited master is made on a high band, Ampex 7800 VTR by dubbing content from the master tapes. This dubbed, edited master then becomes the tape from which copies are made for distribution. Naturally there is some loss of quality from the original master to the second-generation distributed copies, but it is not felt to be critical considering the fact that the tapes produced are intended for private rather than commercial use.

INFORMATION FOR ORDERING TAPES

The order blank which follows is largely self-explanatory; however, a few additional comments may be helpful.

The Project will dub the content of its tapes onto tapes already owned by the ordering institution provided these are in sufficiently good condition to permit routine operation of dubbing equipment. If defective tapes are received, the Project will consult with the ordering institution and possibly negotiate a higher dubbing charge, if an inordinate amount of time is required to make usable copies. The Project reserves the right to refuse to dub content onto tapes which will not produce copies of reasonable quality.

Those ordering institutions who must purchase the blank tapes, as well as the content, can obtain them directly from the Project at current commercial prices listed on Page 199. This service is provided to enable purchasers to avoid the additional cost of sending blank tapes to Northfield, Minnesota.

WHEN ORDERING, IT IS IMPERATIVE TO LIST THE BRAND AND MODEL OF PLAYBACK EQUIPMENT. THOSE WHO ARE PURCHASING BLANK VIDEO TAPE MUST ALSO GIVE THE BRAND NAME AND WIDTH OF TAPE DESIRED.

Information relating to the desired method of shipment permits this to be done in accordance with your convenience in receiving them and your time schedule. Shipping expenses are prepaid and added to the cost of the order. Delivery times vary with volume of orders received. Although some may be filled within a day or two, it is recommended that a minimum of two to three weeks be allowed for shipment, especially for orders numbering ten or more tapes.

Dubbing charges are twenty dollars ($20) per volume; tapes vary in length from about thirty minutes to sixty minutes. This charge includes the written supplementary materials.

A major feature of the order blank is that the agreement, stated as Item #6, requires the signature of a responsible official. Even in those instances where institutions may order via letter or requisition form, it is necessary that this signed agreement be attached. In effect, it asks users to honor assurances given by the Video Tape Project in obtaining permission to distribute the tapes.

The order blank included with this catalog may be removed for use. Additional order blanks will be provided as each order is processed.

The following is a list of all types of video tape playback equipment for which the Carleton Video Tape Project can prepare dubbed copies of tapes. Prices quoted are for each reel of blank tape when ordered through the Project. Where more than one machine is listed, tape is interchangeable among machines listed. These video tapes can be supplied only in the 525/30 U.S. Standard for 60 cycle machines.

Machine Type	Tape Width	Normal Max. Length	Price Per Reel (Blank Tape)
Ampex	2''	67 Min.	$56.00
Ampex	1''	60 Min.	$54.00
Bell & Howell, Chester GPL, IVC, RCA and Riker/CPE	1''	60 Min.	$41.00
Sony and GE	1''	60 Min.	$54.00
Sony and GE	1/2''	60 Min.	$35.00
APECO and Shibaden	1/2''	60 Min.	$35.00
Concord and Panasonic	1/2''	40 Min.	$35.00
EIAJ Standard #1	1/2''	60 Min.	$35.00

The Project does not provide pre-viewing opportunities to potential users because it is not economically practical. The cost of dubbing a tape and shipping it for previewing is the same as for purchase.

PLEASE COMPLETE IN FULL

ORDER BLANK

TO: CARLETON COLLEGE
VIDEO TAPE PROJECT
NORTHFIELD, MINN. 55057

FROM:
ADDRESS:

1. For Use On: ______________________________
Brand, Model No. and the Tape Width of Playback Equipment

(Because of the large number of machine standards in use, it is imperative that the above be a detailed description so that your order can be completed satisfactorily and without delay.)

2. Check One: _____We are sending you tape for use on our machine (as indicated in 1 above).
_____We do not have tape and hereby authorize you to purchase it for use on equipment as indicated in 1 above.

3. Please send us copies of the video tapes listed below:

Volume_______ Volume_______ Volume_______ Volume_______ Volume_______

Volume_______ Volume_______ Volume_______ Volume_______ Volume_______

4. Type of shipment desired: ______________________________
(Normally shipments under 25# will be shipped parcel post, those over 25# by either UPS or Railway Express.)

5. Costs: $20 dubbing charge per volume, plus tape cost (if purchased through Project), plus postage or shipping charges.

TO BE COMPLETED BY PROJECT

Supplementary Materials sent_________

Tape sent_________

Dubbing Charge_________

Tape Cost_________

Postage_________

Total Charge_________

6. We understand that in requesting copies of the video tapes listed above, we must honor the commitments to the school districts and teachers in whose classes the tapes were made, as well as those to the curriculum projects who have made unpublished, experimental materials available for distribution with the tapes; therefore, we agree to

a. use these tapes for teacher education purposes only,
b. not to reproduce the tapes without permission of the Video Tape Project,
c. not to reproduce the experimental, unpublished materials provided by the curriculum project.

We also understand that any use of the video tapes contrary to the letter or spirit of this agreement may subject the tapes to immediate recall; and the violator will be liable to the Project or any contributing person or organization, for damage incurred thereby.

SIGNATURE OF AUTHORIZED OFFICIAL:

Dated:______________________________

____

Title:______________________________